S. Vaughan

LXVIII.

VOL. XI. NOVEMBER. 1853. NO. 2.

THE WESTERN JOURNAL AND Civilian,

DEVOTED TO

Agriculture, Manufactures, Mechanic Arts, Internal Improvement, Commerce,

PUBLIC POLICY,

AND

POLITE LITERATURE.

Agriculture and the Mechanic Arts are the basis of Civilization.

M. TARVER & H. COBB,
EDITORS & PROPRIETORS.

PUBLICATION OFFICE: No. 73 Chesnut Street, near Planters' House.
Published monthly at $5.00 per annum in advance.
Postage 1 Cent a month, payable quarterly in advance.

ST. LOUIS,
Printed by M. NIEDNER, Weld Building, cor. 3rd & Chesnut Street.

1853.

JOSEPH MOGRIDGE,

(Late TWICHELL & MOGRIDGE.)

COMMISSION AND FORWARDING MERCHANT,

38 Commercial and Pine Streets, ST. LOUIS, MO.

Liberal CASH ADVANCES on Consignments, IN HAND.—Personal attention given to the RECEIVING and FORWARDING BUSINESS.

REFERENCES:

Dean, King & Co., Page & Bacon, Chouteau & Valle, Charless, Blow & Co., — St. Louis.

Ellis & Morton, Strader & Gorman, Hosea & Fraser, Springer & Whiteman, E. O. Goodman & Co. — Cincinnati.

J. W. Butler & Bro., D. Leech & Co., Wm. Holmes & Co. — Pittsburgh.

H. D. Newcomb & Bro., W. B. Reynolds. — Louisville.

E. C. Varnall & Co., Morgan, J. M. Brock & Morgan, B. B. Comegys, Shields & Miller. — Philad'a.

Blow & March, Frost & Forrest, Charles E. Meigs. — New York.

A. G. Farwell & Co., Howard, Son & Co. — Boston.

Josiah Lee & Co., Abraham G. Cole. — Baltimore.

T. C. Twichell & Co., Com. Merchants, New Orleans.

EXCHANGE, COLLECTION & COMMISSION HOUSES.

COCHRAN, BULLARD & CO, 11 Camp Street, New Orleans.

S. W. & S. G. COCHRAN & CO., Mobile, Ala.

Dealers in Exchange, Time Paper, Uncurrent Money, Foreign and Domestic Gold and Silver. Checks on the principal cities of the United States for Sale.

Will receive Drafts, Notes, and Bills of Account for Collection upon any point South and Southwest.—Proceeds of same promptly remitted at the current rates of Exchange, WITHOUT CHARGE.

REFER TO

ST. LOUIS—*E. W. Clark & Bro., Bankers.*
LOUISVILLE—*J. P. Curtis & Co.,* "
CINCINNATI—*Ellis & Morton,* "
PHILADELPHIA—*Drexel & Co.* "
E. W. Clark & Co "
Fales, Lothrop & Co.
BOSTON—*Gilbert & Sons Bankers.*
Howard Son & Co.
MOBILE—*John A. Winston & Co.*
William Eckford.

N. YORK—*John Thompson, Esq., Wall st.*
Houghton & Co., Wall st.
Bebee & Co., Wall st.
Frost & Converse, Pearl st.
N. ORLEANS—*Brander, Williams & Co.*
Hill, McLean & Co.
Bradley, Wilson & Co.
J. P. Whitney & Co.
Converse & Co.
W. B. Parree & Co.

THE

WESTERN JOURNAL

and Civilian.

VOL. XI. November, 1853. No. II.

ARTICLE I.

The Influence of War and Public Improvements upon Prices.

The stringency experienced in the money market for some time past, and the prospect of a war between Russia and Turkey having changed the commercial aspects of this and other countries, we have concluded to place before the public the result of our reflections touching the consequences of these events.

If we recur to the industrial history of the United States, we shall find no period in which the people have been more generally employed or better rewarded for their labor, than during the last three years; nor has there been a time, we believe, when labor was more wisely directed. Why, then, should a difficulty arise in the money market, especially when we are receiving gold from California at the rate of about $5,000,000 per month? We answer, because the demand for money arising from the excessive importation and consumption of foreign commodities, the expansion in the price of all kinds of property, the accumulation of the precious metals in the public treasury, and the numerous railroad schemes recently projected, exceed the supply. Credit accumulating, became too abundant, and being subject to the laws which govern the price of other commodities, dealers became cautious and would purchase only the best qualities. The lower grades depreciated and ceased to be marketable, confidence, one of the principal agents of commerce, was weakened, and the necessity of supplying its place with money at a short notice, required unusual exertions, well calculated to create a panic.

It is fortunate for the country, however, that this state of things occurred at so early a period, for, even if money could

have been obtained for the purpose, the building of all the railroads which have been projected in the United States, at the same time, would have enhanced the price of labor and materials to an extent that would make the stock of little value when the works were completed.

The check which has been given to the sale of railroad securities will lead to more rational views touching the economy which should be observed in carrying out a great system of public improvement. It shows the necessity of estimating time as one of the elements of wealth, and teaches the policy of relying more upon local and less upon foreign resources. It furnishes an argument in favor of producing iron for the construction of railroads from the ores of the region in which the works are located; and if the people of the West should possess sufficient sagacity to perceive and appreciate these arguments, and sufficient courage and firmness of purpose to adopt the policy suggested, they will find abundant reason in the end to rejoice that they were disappointed in carrying out their plans according to their original designs. For if they build their railroads by the use of their own money and iron, it will be the means of opening their mines, of establishing manufactures, and of enlarging the home market for the products of agriculture. And, besides all this, when completed, the profits of the roads will be retained at home, and become a permanent source of wealth, instead of operating as a drain upon the circulation of the country, which must be the case if they are constructed by the use of foreign capital.

It would be disingenious, to attempt a concealment of the fact that many of the more recent railroad projects, which are based mainly upon calculations of obtaining money from the Eastern cities and from Europe, will be compelled to suspend operations for a season. But we do not admit that all unfinished works will be compelled to stop. Money, though checked in its circulation, was never more abundant in quantity; and the better class of securities will continue in sufficient demand to enable the stronger companies to prosecute their works to completion. When these shall have been completed, the suspended projects, if required to promote the public welfare, will revive, and take their turn in the market; and thus our great systems of railways will be carried out upon principles more compatible with the wants and resources of

the country than if all were to progress at the same time. Let us examine the grounds upon which these opinions are based.

We have no means of knowing the amount of railroad securities which have been offered in market, but we know that the supply greatly exceeds the demand. The large dealers in bonds and stocks do not purchase them to keep, but, like dealers in other commodities, buy to sell again; or, purchase on commission to fill orders. Their principal customers, who may be regarded in the light of consumers, consist of individuals not engaged in active business, and, consequently, invest their money in this kind of property with a view to a certain and permanent income for their support. With this class of customers undoubted solvency and certainty of payment are regarded as essential qualities, and it would be unreasonable to imagine that they would risk their means in the stocks or bonds of railroads not yet completed. They look out for securities whose character has been established by time, leaving the new bonds in the hands of the dealers until their soundness and paying qualities are firmly established. While undergoing this ripening process in the hands of the dealers, the money invested in them is drawn from the ordinary channels of commerce, and transferred to the interior to pay for labor and materials. Hence the want of money is felt at the great commercial centers, interest advances, and, as a natural consequence, the demand for stocks declines. All this takes place under the influence of certain laws of commerce, which, in the end, overrule every contrivance that can be devised to resist their operations.

But notwithstanding the redundancy of securities in market, and the impossibility of raising money upon them all at the present time, yet, the solid and efficient elements required to prosecute and accomplish great works of public improvement were never more abundant; nor has there been a period when it was so completely in the power of the people of this country to control and direct these elements to the development of our own great resources. We produce more gold than any other nation; and possess a larger quantity of iron; and it is owing chiefly to our neglect of the latter and the extravagant consumption of foreign dry goods, that the precious metals are required for exportation. Were our foreign trade so adjusted as to leave us in possession of the gold produced in California, it would be in our power to proceed with all our railroad projects, which possess sufficient merit to

authorize their construction, without looking to Europe for the means of carrying them on. California supplying the money, and foreign immigration the labor, our great systems of public improvement would be accomplished without disturbing the ordinary and legitimate operations of commerce or of agriculture.

Should the war between Russia and Turkey be vigorously prosecuted, and continue for one or more years, it will tend to favor rather than prevent the prosecution of our public works. Large armies are great consumers of bread and provisions, and it is fair to conclude that the demand for these commodities will be considerably increased by reason of a war in the East; and, that the volume and money value of our exports will be enlarged, at least to an extent that will balance our imports without the exportation of the precious metals.

We are aware that the opinion prevails, that an advance in the price of bread and provisions is calculated to depress the price of cotton; and that, consequently, the aggregate money value of our exports will not be materially enlarged by an extraordinary demand and high prices for these commodities in Europe. The grounds for this opinion are plausible, but the conclusion is not sustained in all its aspects by history; for the facts show that high prices of bread have not, at least, immediately, depressed the price of cotton in the two instances when our exports of breadstuffs to Europe were the greatest. In the year 1815, the price of cotton began to rise, and continued to advance until 1818, when it was sold in the southern markets at over thirty cents per pound. The average price of flour exported at Philadelphia, in the year 1815, was $8.71 per barrel; in 1816 it was $9,78 per barrel; in 1817 it was $11.69 per barrel, and in 1818, $9.96 per barrel.* In 1817, the export value of flour amounted to $17,291,824, the largest amount in value that was ever exported from the United States in any one year until the famine of 1846–47. In 1819, the price of cotton diclined to less than half the price of the preceding year, and flour declined also: the average price in Philadelphia during 1819 being only $7.11. In 1820 the price of flour fell to $4.72, and ranged from $4.65 to $6.82 until 1836, when it advanced to $7.99; and to $9.37 in 1837. But the rise in price in this instance was occasioned by a scarcity at home, and not by

* Vide Hunts's Merchants' Magazine, vol. XII, page 313.

the foreign demand—the quantity exported in 1837, being only 818,719 barrels. Nor did the high prices of bread in Europe, in 1846 and 1847, prevent the price of cotton from advancing. By reference to a tabular statement of the prices of cotton at New-Orleans, for each month from September 1846 to November 1847 inclusive—covering the period when breadstuffs were in greatest demand in Europe—it appears that they were higher during that period than at any time within several years previous; and, that they declined soon after the intense demand for bread ceased. From September, 1845, to August, 1846, inclusive, the price of middling to fair cotton ranged from 6½ to 8½ cents per pound, and from December, 1847, to August, 1848, inclusive, the same qualities ranged from 5 to 8 cents per pound.†

The following table exhibits the prices of middling and fair cotton at New Orleans, from September, 1846, to November, 1847, inclusive:

September,	1846,	7½@	9	May,	1847,	10⅝@	12¼
October,	"	8¾	10	June	"	9⅞	11¾
November,	"	9	10½	July,	"	9¼	10¾
December,	"	9	10½	August	"	10½	12
January,	1847,	10	11¼	September,		10⅝	12
February,	"	11½	13	October,	"	10	11
March,	"	9½	11	November,		7½	8⅛
April,	"	10⅜	11⅜				

The export value of cotton for the year ending 30th June, 1847, was $53,415,845, and exceeded the amount of either of the two preceding years; the exports of breadstuffs during that year was valued at $53,262,437.

Thus, it will be seen that at the two periods during the present century when bread has been in greatest request abroad, the price of cotton has advanced and declined with the demand for that article. We are not to conclude from these facts, however, that the advance in the price of cotton at the periods mentioned was caused by the scarcity and high price of bread in Europe: nor that high prices for bread and provisions would not, in time, be the cause of depressing the price of cotton. But in the case of a war confined to Eastern Europe, we think it a rational conclusion that an active foreign demand for bread and provisions may continue at high

† Vide Western Journal, vol. I, page 630.

prices for a series of years without materially depressing the money value of cotton.

War is a great consumer: and in cases where the avenues of commerce are left open between the belligerents and neutral powers, it imparts great activity to trade by creating a demand for commodities not needed by the belligerents in time of peace One of its consequences, when waged between powerful nations, is high prices at home and abroad; and cotton being one of the commodities necessary to human comfort, it is fair to assume that it will, in common with other commodities, advance in price: though not as suddenly, or in as great a degree perhaps, as bread and provisions.

Recurring to the commercial aspects of the times, we perceive no cause to apprehend any serious inconvenience to the community in general, arising from the transactions of the past, provided a reasonable degree of circumspection and prudence should be observed in future. Individuals are embarrassed by an improvident use of credit, and by habits of extravagance. Railroad corporations are disappointed in negotiating securities, and some may sustain great losses from being compelled to suspend operations; but these misfortunes will scarcely be felt or perceived by the great body of the people as a community. If the reports of the banking institutions of the country are entitled to credit, the banks and the currency, with occasional exceptions, are in a sound condition; and although the importations of foreign merchandise has been large beyond all precedent, we have no cause to infer that the balances have not been discharged with the promptness which distinguish mercantile transactions in the most prosperous times. The crop of cereals and provisions is abundant, and prices highly remunerating. The crop of cotton will probably be an average one and prices at least fair; the production of gold in California is still large, and probably on the increase; and the government, by the purchase of its own obligations, is endeavoring to release from confinement in the public treasury a part of the $25,000,000 which is now prevented from performing its office in the commerce of the country. In view of these vast resources in connection with what we conceive to be the true condition of the country as one entire community, we are compelled to conclude that the stringency of the money market will be of short duration. Indeed, we think it

probable that the balance of specie between this country and Europe will be in our favor during the first half of the ensuing year. Should that be the case, it will be our best policy to appropriate as much of the accumulating gold as practicable to the construction of railroads, if for no other purpose, to prevent speculations in less meritorious objects. Speculations in unproductive property, and inflated prices occasioned by an extravagant use of credit, are the principal dangers to be apprehended during this and the ensuing year.

It may be regarded as impossible in the present state of human intelligence, to regulate commerce, and credit, (which is one of its principal elements,) so as to make the price of all commodities bear a just proportion to the cost of producing them, and, to their utility in the hands of the consumers. And, hence, alternate succession of high and low prices, though not a fundamental law of commerce, is a law proceding from the condition of individuals and society, as they are found to exist, and cannot, therefore, be entirely prevented. But notwithstanding fluctuations in prices must continue to occur, it is possible, by prudence and forecast, to modify them so as to avoid many of the evils incident to great revulsions. Whether the people of the United States possess wisdom and moral courage in a degree sufficient to direct the active development of our varied and vast resources without producing a general revulsion in prices and trade, is a problem which we shall not attempt to solve; but we entertain the opinion that no such revulsion can be reasonably expected for several years to come, unless occasioned by the occurrence of some extraordinary event not usually provided against in the calculations of men touching their ordinary affairs.

ARTICLE II.

Aubry's Journey from California to New Mexico.*

NOTES.—BY F. X. AUBRY.

TEJON PASS, *July* 10*th*, 1853.—As the country between this point and San Francisco is well known, I have kept no minutes of my journey thus far. We crossed the Sierra Nevada at the Tejon Pass, which is in about the 35th parallel of latitude, and about 50 miles south of Walker's pass. From this point we travel east until we reach the Rio Grande at Albuquerque, New Mexico. It is well to remark that, unfortunately, there is no one with us who knows anything of the country through which we must pass, and we could not obtain any information in regard to it. *My* party consists of eighteen men—twelve Americans and six Mexicans. Messrs. Tully, of Santa Fe, and Adair, of Independence, have joined us for a pleasure trip. We use pack animals entirely, having neither wagon nor carriage.

July 11*th*.—Left the Pass, and made twelve miles east over a level, gravelly and sandy soil, and found a spring of good water.

July 12*th*.—Traveled twenty miles eastward, the country similar to that of yesterday. We met with no timber, but found several springs of fresh water. There is timber in the mountains about the Tejon pass, but none on the eastern side of them.

July 14*th*.—Travelled to-day 35 miles east, and struck the Mohave river, where we found plenty of good water. This river sometimes disappears in its course, whilst at others it contains as much as two feet of water. There is a little cotton-wood timber upon its banks, and canebrakes in great abundance. The cane is not of the large species.

The Mohave takes its rise in the San Bernardino mountains, which lie to the south of us, and after pursuing a northern course to a point a little north of our present camp, turns suddenly east, and soon south of east to empty into the great Colorado. Found good grass for our animals.

July 14*th*.—Made 20 miles east along the Mohave, and found water, timber and grass abundant.

July 15*th*.—Continued along the river about 18 miles further, in a direction nearly east, then leaving the Mohave to our right, we traveled 15 miles north-east.

Met with an abundance of grass, a little timber, and a few miles of fertile land along the river. There is no water in the bed of

* The following account of a trip made by F. X. Aubry from California to New Mexico, through an unexplored region, is full of interest, especially at the present time; and is highly worthy of being preserved in American history on account of the heroism displayed by the author and his comrades.—*Editor.*

the stream; but it may be had by digging a few feet. Found wild game from time to time. Encamped without water, grass or wood.

July 16*th.*—Still pursuing a north-eastern course—we traveled to-day 35 miles over a level, gravelly soil. We have deviated from our due east course in order to avoid a region of sand hills that lie to our right, and directly between us and the Great Colorado. The weather is very hot, and no rain has fallen since we left the Pass. So far we have met with neither Indians nor game of any kind. We obtained a little water about half-way in our day's journey; but saw no timber or grass.

July 17*th.*—Made 33 miles north-east, over a level, gravelly country; about half way obtained a little very bad water. No grass or timber in sight during the day; but at night we obtained good water, grass and wild game. Prairie mountains lie on both sides of the trail.

July 18*th.*—Traveled 20 miles, still north-east, over a level country. Saw but little good land, and no timber. After traveling about 5 miles, we found good spring water, but encamped without any.

July 19*th.*—Course still north-east, distance 32 miles, country level, soil inferior, grass and water, but no timber.

July 20*th.*—Made 20 miles north east over a level, gravelly country, and obtained good spring water and grass. Saw no timber.

July 21*st* —Were detained in camp all day by the sickness of one of the men.

July 22*d.*—Traveled 20 miles east-south-east, most of the distance through a little canon, where we found good grass, water and game in abundance, and struck the great Colorado of the West. The river at this place is over 300 yards in width, and has from 10 to 15 feet water in the channel. Its banks are entirely destitute of timber and grass; in fact, no vegetation is met with except a small shrub, called *chamezo* by the Mexicans, and I believe *artemesia* by botanists. We were very fortunate in striking the river at this point, where there are neither canons nor mountains, although the country appears very rough and mountainous both to the north and south of us. To the north, the rocks are black and irregular, and seem to be volcanic: whilst the cliffs to the south are of red sandstone. The banks at the crossing are low, rocky and unchanging, and the current exceedingly rapid.

We followed the river up for 5 miles, and selected a crossing where it was some 200 yards wide and 20 or 25 feet deep. We succeeded in finding a little drift wood, of which we made a raft. Four men took charge of it, and it was carried some 3 miles with the current before it could be landed. The hights were covered with Indians, in readiness to shoot us down. I started down with four men to follow the raft and protect the men who were upon it, having ordered the camp to move down in haste. Having unloaded

the raft upon the eastern bank, the men recrossed the river, and we selected a camp opposite the place where the baggage was deposited, and during the night kept up a constant fire with our rifles across the river, and in this manner protected it from the Indians.

The animals were taken to the crossing I had first selected, to swim the river. I took them up with three men on the west bank, and four men received them on the opposite side. This detained us half a day, and altogether we were detained five days in crossing the river.

The driftwood of which we constructed our little raft, appeared to have been cut by beavers. These animals must be exceedingly abundant, as they destroyed during the first night the ropes with which our raft was bound together, and carried off the timber. The loss of the ropes was a great inconvenience to us. We set a guard afterwards at night over our second raft, to protect it from a similar fate.

The river showed signs of having been some fifteen feet higher than when we crossed it. It is here a grand and magnificent stream, swift like the Mississippi, and apparently as well adapted to navigation.

The place of our crossing is well suited to bridging, or ferriage by steam or otherwise.

We saw no water-fowl about the river, and only a few antelope and black-tailed deer. East of the river we encountered a great many rattlesnakes of an uncommonly large size. They seem to be a new species, as their tails are covered, for some six inches from the point, with alternate white and black rings of hair or bristles, about a quarter of an inch long.

According to my observations the Colorado of the west is set down upon the maps greatly too far to the east, perhaps as much as 150 miles.

The Indians were constantly in sight, and watching our movements. They could not be induced to approach us; but assured us, across the river, that they were Mohaves.

On one occasion, whilst at rest for a few minutes in a deep gulley, about a mile from the crossing on the west side of the river, a Mexican mule-boy discovered something glistening upon the ground, which on examination proved to be gold. We at once commenced washing sand in our tin cups, and in every one discovered particles of gold. This gold was discovered in a dark, coarse sand, and a black heavy sand was found in the cup after washing away the gravel. The sandy soil was so compact that we could not dig it up with our fingers. The Indians being still on the hights near us, and our party being separated by the river, the danger was so great that we could not remain longer at this spot. I intended to return again, but the Indians became so numerous that it was impossible to do so. This gulley is on the right bank of

the river, and the head of it is in a very rough and rugged mountain.

July 27th.—We washed sand on the east side of the river, and found gold in greater abundance than on any previous occasion. A Mexican boy, on washing a frying-panfull of coarse sand, found from forty to fifty particles of pure gold, some of which were as large as the head of a pin. We took the clay and sand from the top of the ground without digging. The appearance of the country also indicated gold. I made no further examination, as our animals had subsisted for five days upon the *chamezo*, without a blade of grass, and our provisions had been damaged in the Colorado, which must cause us to travel several days without anything to eat.

To-day we made 10 miles east. The country is without wood, water or grass.

July 28th.—Two of our men being sick, we were compelled to return to the river on their account.

Struck it some 15 miles below the crossing, and found that from near that point it makes a considerable bend towards the east. The country here does not indicate gold, nor could we find any on washing the sands.

July 29th.—The condition of our sick men obliged us to remain in camp all day. Our animals were in a starving condition, as there is not a particle of grass on or near the river.

July 30th.—Left the river and traveled 15 miles east, and 5 north-east. A sick Mexican was so much exhausted that we were compelled to make for a mountain north of us, which indicated water; but we found neither water, timber nor grass.

July 31st.—Traveled 8 miles, north-east, and struck a large stream, but much smaller than the Colorado, coming from the east-south-east, and running west-north-west. This stream may be what the Mexicans designate as the Rio Grande de los Apaches, and what the Americans have recently called the Little Red River.

One of our Mexicans followed this stream a few miles, and says it empties into the Colorado, 7 or 8 miles below camp, and that there is below us a valley of good soil, and grass in abundance. Where we struck this stream there is neither timber nor grass.

In the evening, we traveled 5 miles south, to avoid mountains, and as many east.

The country was level, but without grass or timber.

The mountains, or perhaps more properly hills that we have thus far met with, are nothing more than elevations of various forms and dimensions, dispersed in a detached and irregular manner over a vast and otherwise uninterrupted plateau. Hence, I have constantly termed the country level, and very properly, as it may be traversed in all directions among the solitary and detached elevations or mountains, without the necessity of crossing them.

August 1*st*.—Traveled 20 miles east, and found a spring of good water; the grass was abundant, and cedar trees were seen on the highlands. The country is level, and the soil inferior.

August 2*d*.—Made 10 miles east, crossing a mountain or ridge, where we found a fine pass, grass and timber (cedar and pinon,) abundant.

August 3*d*.—Traveled 20 miles south of east, over a country somewhat broken: timber and grass abundant. Indians were around us in numbers, all day, shooting arrows every moment. They wounded some of our mules, and my famous mare Dolly, who has so often rescued me from danger, by her speed and capacity of endurance.

August 4*th*.—We moved 10 miles south, to avoid mountains, and struck a valley which we left a few days since, and which extends to the Colorado. The mountains which we left are covered with timber. Grass and water were found in plenty.

The Indians commenced firing on us at sunrise, and continued until we reached camp. Arrows passed through the clothes of the men, and three passed through my own clothes, and I was slightly wounded by two others in different places. An arrow passed through the collar of Dick Williams. We killed several of the Indians and wounded more. Peter Prudon accidentally shot himself in the right knee.

August 5*th*.—Traveled 10 miles south-east in a valley. No water; grass and timber in abundance on all the mountains.

August 6*th*.—Continued 10 miles south-east in the same valley in which we traveled yesterday; found no water, but good grass and plenty of timber on and below the mountains. As our sick men are unable to travel, we are suffering for water, having been nearly 3 days without any; and indications are not now favorable. Indians still around us.

August 7*th*.—Traveled 10 miles south-east, half the distance in the same valley, and then went to a mountain, and found good water, grass and timber. All the mountains in this country are covered with cedar, pine and pinon. The grass is good in all the prairies, but none of them have any water. The soil is sandy and full of particles of mica. Indians are numerous, and continue to fire upon us.

August 8*th*.—Made 15 miles east-south-east, crossing a little chain of mountains, where we found a level pass, and timber, grass and water in abundance. Crossed a stream running from north-east to south-west, which I think goes to the Colorado. After crossing the mountains, we passed through a fine valley, with an abundance of good spring water, and timber near it. The Indians attacked the camp several times last night, but without success, and continued fighting us during the day, but with less boldness and resolution.

August 9th.—After proceeding 8 miles east, we found ourselves surrounded by canons, apparently from one to four thousand feet deep; at least we sometimes could not see the bottom. We were compelled to return to the same camp. The country is high and level, and well supplied with timber, grass and water.

August 10th.—Moved 10 miles south-east over a somewhat broken country. Crossed a stream of good water, (with timber along its course,) which is evidently a tributary of the Gila. The country indicates gold in abundance. We crossed a little chain of mountains, where we found a great quantity of silver ore in flint rocks.

August 11th.—Traveled south-east over a country a little broken, but well supplied with water, grass and timber. Indications of gold still exist.

August 12th.—Made 15 miles south-east, crossing the bed of a large stream now dry, with plenty of timber along it. Struck the valley which we left some five or six days ago, having crossed a few days ago the head water of a stream which passes through it. This valley will be of the utmost importance in the making of a wagon or rail road.

To-day, for the first time on this trip, we ate a dinner of mule meat. It was a new dish to most of our men, and made some of them sick. To me it was an old acquaintance, and I feel well. It only served to remind me of hard times on other journeys. The quality of the meat depends on the appetite of the man. Several of us are now on foot.

August 13th.—Marched 20 miles east, leaving to our right the great valley so often mentioned, and which extends to the Colorado. Passed through a little valley between two mountains, where we found timber, grass and water in abundance. The soil was excellent.

We here met Indians, who professed to be very friendly, with papers of recommendation from the commanding officer of Fort Yuma, on the Gila trail.

August 14th.—We left early, and after traveling 5 miles in an eastern direction, stopped to breakfast near an Indian camp of Garroteros. They professed friendship, but having no faith in their professions, I selected a camp on the top of a small hill, which would give us advantage in case of a fight. All went on well until our mules were saddled, and we were ready to start, when, at a given signal, some forty or fifty Indians, apparently unarmed, and accompanied by their squaws, children and babies, (tied to boards,) in their arms, very suddenly charged upon us, and attempted to destroy the whole party with clubs and rocks. The signal of attack was the taking of my hand in farewell by a chief, which he held with all his strength. So soon as these first Indians commenced the fight about two hundred more rushed from behind a hill and brush, and charged upon us with clubs, bows

and arrows. I thought, for a few minutes, that our party must necessarily be destroyed; but some of us having disengaged ourselves, we shot them down so fast with our Colt's revolvers, that we soon produced confusion among them, and put them to flight. We owe our lives to these firearms, the best ever were invented, and now brought, by successive improvements, to a state of perfection.

Mr. Hendry, an American, and Francisco Guzman, a New Mexican, greatly distinguished themselves.

Twelve of us, just two-thirds of our party, were severely wounded. I, among the rest, was wounded in six places. Abner Adair, I fear, is dangerously injured. It was a very great satisfaction to me to find that none of my men were killed, nor any of the animals lost. We bled very much from our numerous wounds; but the blood and bodies of the Indians covered the ground for many yards around us. We killed over twenty-five, and wounded more. The bows and arrows that we captured and destroyed, would have more than filled a large wagon.

Before the attack commenced, the squaws kept the clubs, which were from 18 to 24 inches long, concealed in deer skins about their children. When put to flight, they threw their babes down into a deep, brushy gulley, near at hand, by which many of them must have been killed. This is the first time I ever met with a war party of Indians accompanied by their wives and children. The presence of the latter was evidently to remove from our minds all suspicion of foul play on their part. I was never before in so perilous a condition with a party in all my life. On this occasion, which will be the last, I imprudently gave my right hand, in parting, to the Indian chief. The left must answer for leave taking hereafter.

We have thus far had so much ill-luck to encounter, that our arrival at our destination must be much delayed. First, our men fell sick, then our provisions were damaged in the Colorado; latterly, a man shot himself through the knee; our mules' feet, for want of shoes, are worn out; and, to crown all, to-day two-thirds of the party are badly wounded, and all have barely escaped with their lives. We are now subsisting entirely on mule meat, and do not get as much of that as we want. We are without salt and pepper, and, in their absence, it requires a stout stomach to digest our fare. But nobody complains, and the possibility of not doing what we have set out to do, has never entered the minds of my party.

We traveled 5 miles this afternoon, with the Indians at our heels, shooting arrows at us every moment.

August 15th.—Traveled 10 miles east among mountains, where we found water, grass and timber in abundance. Indians around us all day shooting arrows. I omitted, in the proper place, to say that I brought away from the mountains we passed through on the

10th, a little black sand, less than a cupful, and found in it, on washing, twelve or fifteen particles of pure gold.

August 16th.—Made 10 miles east and found no water; plenty of grass and timber seen on the mountains north of us. Indians still numerous and troublesome. To-day met with copper in very great quantities. A vein of the pure native metal, about an inch and a half in diameter, was seen sticking out from a rock, which must have worn away by time and left the copper exposed. I think there is gold in the ore, but am not certain.

Our condition at present is bad enough. I have eight wounds upon me, five of which cause me much suffering: and at the same time, my mule having given out, I have to walk the whole distance. Thirteen of us are now wounded, and one is sick, so that we have only four men in good health. We are unable to travel faster on account of Adair's condition.

Our canteens, &c., having been broken or destroyed in our fight with the Indians, we cannot carry water enough for more than half a day. This loss caused us to suffer more than can be imagined. Our animals are broken down by this traveling, which could not be avoided. We would come across an abundance of water every day if we could march some twenty-five or thirty miles, but our condition is such that it requires three days to make that small distance. In addition to all this, we are now on half rations of horse meat; and I have the misfortune to know that it is the flesh of my inestimable mare *Dolly*, who has so often, by her speed, saved me from death at the hands of the Indians. Being wounded some days ago by the Garroteros, she gave out, and we are now subsisting upon her flesh.

August 17th.—Moved to-day about 10 miles east, over a country rather rough. Suffering much for want of water. In crossing mountains we have to select the highest places instead of the regular passes, as when caught in canons or gullies we are not strong enough to fight the Indians. To-day, from the top of a little mountain, I saw the great valley, so often mentioned, extending to the Colorado, not over twenty miles south of us, and it now seems to turn more to the east. I intend to make for it. I entertain fears that Adair and Baskerville are in danger from their wounds; all the others are getting better.

August 18th.—Moved only 5 miles south of east. Found water, grass and some timber.

August 19th.—Went 5 miles to-day in the same direction as yesterday, and came to the great valley that extends to the Colorado. Encamped on a creek of good water and grass. Adair being sometimes unable to travel, we are waiting on him. Indians around us shooting arrows. We never return their fire without being certain of our shots.

August 20th.—Traveled 20 miles east, over a level, gravelly country; crossed a creek; found good grass; no timber in sight.

August 21*st.*—Moved 10 miles east over a level, gravelly country, and struck a large stream which is, no doubt, a branch of the Gila. The mountains to the north of us are very rough, and without timber.

There is no grass on the stream, which is 30 yards wide, with three feet of water in the channel. Its course is from north to south.

August 22*d.*—Made 10 miles south-east to a mountain. Country level, and without grass or timber.

August 23*d.*—Moved about the same distance and in the same direction, over a low, gravelly country. Struck a stream of good water, but without grass or timber.

August 24*th.*—Went about 8 miles north-east, and emcamped in the mountains, where we met with the Apaches Tontos. No timber seen to-day.

August 25*th.*—Crossed the mountains where the Apaches Tontos live, and found water, timber and grass in abundance. Traveled 15 miles northeast from the top of this mountain, from which we saw the Sierra Blanca Mountains, which are near the Puebla of Zuni.

Saw a prairie extending from the east end of the Garrotero Mountain to the upper end of the Sierra Blanca. I saw this prairie when we were at the east end of the Garrotero Mountain, but we were not in a condition to examine it. Fifty miles is nothing with good animals; but ours were broken down, and our wounded men were unable to travel over ten miles a day. But I saw the country sufficiently well to convince me that there will be no obstacle whatever to the making of a rail or wagon road. The mountains which we crossed to-day are impracticable for either. I should like to return to the east end of the Garrotero Mountain and pursue the route I indicate; but it is utterly impossible to do so, as we are now living on berries and herbs. We would rejoice to have mule meat, but we have so few animals, and so many wounded men, that it would be unsafe to kill any more. I have the good fortune of having true men with me, otherwise it would be uncertain that the party could get through; but I have confidence in my men, and I feel positively certain that we will make the trip.

It will take us some ten or twelve days to reach Zuni, where we expect to procure provisions. I shall travel near the mountains, as heretofore, on account of the certainty and facility of getting water, but shall remain in sight of the prairie extending from the Garrotero to the Sierra Blanca mountain.

August 26*th.*—Moved 10 miles east-north-east, most of the way along a creek, where we found grass in plenty, and some timber. The Apaches Tontos are numerous and troublesome.

August 27*th.*—Made 15 miles east, crossing two streams which are branches of the Gila. We met Indians to-day, who, I think, are not Apaches Tontos, as they do not speak any Spanish, and

refuse to answer our questions. We obtained from them over fifteen hundred dollars worth of gold for a few old articles of clothing. The Indians use gold bullets for their guns. They are of different sizes and each Indian has a pouch of them. We saw an Indian load his gun with one large and three small bullets to shoot a rabbit. They proposed exchanging them for lead, but I preferred trading other articles. Whether the Indians made these balls themselves, or whether they were obtained by the murder of miners in California or Sonora, I am unable to say.

August 28th.—Traveled 10 miles east, over a good country, met with more Indians and traded for some horse-meat, by giving articles of clothing in exchange. We traded also for a few hundred dollars worth of gold. To-day a mule broke down, and an Indian gave me for it a lump of gold weighing a pound and a half less one ounce.

The Indians are so numerous they would destroy the party if we allowed them the least chance. But we are very vigilant, and select camps on elevated places, consequently we are unable to make any examinations for gold in the sands of the country. The Indians call themselves Belenios.

August 29th.—Traveled some twenty miles in an eastern direction; the country quite level, and the land good, with plenty of grass and water.

August 30th.—Moved about twelve miles north of east, over a country similar to that of yesterday. Found water, grass and pine timber.

September 1st.—Traveled fifteen miles over a country a little broken, and well supplied with water, grass and timber.

September 2d.—Traveled the same distance north-east to the Sierra Blanca. Followed Indian trails all day, and found grass, water and pine timber in great abundance; and most of the soil is of a superior quality.

September 3d.—Pursuing the same course, we traveled some fifteen miles among the same mountains. To-day we passed through valleys of good soil, and we found the pine timber in greater abundance than yesterday. The trees are generally from two and a half to five feet in diameter, and over two hundred feet high. We have seen timber enough to-day to make a railroad from the Eastern States to the Pacific. The passes through this mountain are level, and can be traveled by wagons without any difficulty whatever.

September 4th.—Made 25 miles north-east, crossing the Colorado Chiquito after traveling two miles. The land is level and good, and water and wood are plenty.

September 5th.—Made 20 miles north-east, and got out of the mountains after traveling five miles; struck the prairie, where we found good soil, grass and water.

September 6th.—Continuing north-east over a good and level country for 25 miles, we reached the Indian town or pueblo of Zuni, where we met with a hospitable and civilized population, from whom we obtained an abundance of good provisions, over which we greatly rejoiced.

We have subsisted for a month on mule and horse flesh, and for the most part of that time on half or quarter rations. But as I have reached this place with all my men, I feel satisfied. I shall take no notes of the country from this town to Albuquerque on the Rio Grande, as a level and much traveled wagon road exists between the two places, and is familiar to the people of New Mexico. It has been described by others, and is well known to present no difficulties to the construction of a railroad.

September 10th.—At Albuquerque, New Mexico. Before laying aside my pencil, for the use of which I have no fancy, I shall set down a few ideas that are now prominent in my recollection.

I set out, in the first place, upon this journey, simply to gratify my own curiosity, as to the practicability of one of the much talked of routes for the contemplated Atlantic and Pacific Railroad. Having previously traveled the southern or Gila route, I felt anxious to compare it with the Albuquerque or middle route. Although I conceive the former to be every way practicable, I now give it as my opinion that the latter is equally so, whilst it has the additional advantage of being more central and serviceable to the Union. I believe the route I traveled is far enough south to be certainly free from the danger of obstruction by snows in winter.

The route, in all its length, may be said to pass over a high plateau, or generally level country, for the most part thickly studded with prairie mountains, or detached elevations, seldom so linked together as to deserve to be called a chain of mountains. Numerous mountains were at all times in sight; but being for the most part isolated peaks, a detour of a few miles would always supersede the necessity of crossing them. To the south of our route from the Great Colorado to Zuni, the country was more level than on the north, and for the greater part of the distance a valley extends nearly due east and west to the Colorado. The existence of so many mountains along the way must be considered, in reference to a railroad, as a very fortunate circumstance instead of a disadvantage, as it is the mountains alone which furnish the timber and never failing water. The plains are only deserts and barren spots, if they are to be called so after the fashion of the day, which exist in all that vast region of country which lies between the Gila on the south and the British Possessions on the north, and the Rio Grande on the east, and the Sierra Nevada of California on the west. The plateau, or table lands, must of course furnish the track upon which the road is to be laid; but the mountains adjacent must furnish the timber to make it, and the water

for the use of men and animals employed in its construction, and for the use of the depots afterwards.

It is well for the country over which I passed that these mountains exist, as without them it would be in reality one vast and repulsive desert. It would be a disadvantage for a railroad to have to cross them, as, although not difficult to cross, it would much increase the expense. But I saw nothing that rendered it at all probable that they would have to be crossed. On the contrary, I am satisfied that a railroad may be run almost mathematically direct from Zuni to the Colorado, and from thence to the Tejon Pass in California. The section from the Pass to San Francisco should leave the Tular Lake to the west, and should pass through the Coast Range of mountains, say in the neighborhood of San Juan, and thence to San Francisco, and by a branch to Stockton.

The west side of Tular Lake is unfit for a road on account of its miry nature. The section of the route from Zuni to Albuquerque is plain sailing. That from Albuquerque to Independence to St. Louis, or Memphis, is equally plain, by two or three well known passes through the Sandia Mountains, which lie east of the Rio Grande.

Certain slight deviations from the track which I pursued would improve the route. For instance, it would be better to leave my trail to the north, at a point say 180 miles east of the Sierra Nevada, and intersect it again some fifteen miles west of the Colorado. On the east side of the Colorado the road should pursue a directly eastern course for 75 miles, and thence take an east-south-east course for nearly 200 miles, at the foot and on the south side of the mountain inhabited by the Garrotero Indians. Thence north-east for 15 miles, in a prairie between those mountains and a range of mountains which seem to extend to the Gila. From this point, the road should run easterly to the Colorado Chiquito river, and thence north-east to Zuni. The distance from the east end of the Garrotero mountain to Zuni is about 200 miles. This route, as I indicate it, will pass at all times in sight of my trail, and through as practicable a country as any railroad route of the same distance in the United States.

The proposed route by the Sangre de Cristo, north of Taos, I take, if practicable at all, to be very objectionable on account of the vast elevations the road must ascend to and the large quantities of snow which fall and remain there so long during the winter months. This route has also the additional disadvantage of crossing two rivers, the Grand and the Green, either of which would be as costly to bridge as the Colorado.

A route has been somewhat spoken of just north of the Gila, with the view of having a route wholly on American ground. This, I am satisfied, is altogether out of the question, on account of mountains alone, if no other objection existed. The Gila route proper, passing in part through Sonora, is objectionable on sev-

eral accounts, besides its situation. In the first place, there is no timber upon the plains, nor upon the volcanic mountains that are along the way. A considerable part of the route, too, lies over a country destitute of vegetation, which, when dry, is a white powder, resembling flour, in which the feet of men and animals sink several inches. This same clay, when wet, is the most treacherous of quagmires. Some parts of the road are also very sandy. Don Ambrosio Armijo, who took sheep to California last year, lost as many as eleven hundred among the sand-hills west of Colorado, by sinking in the sand, and being run over by those behind. Another serious objection to the Gila route is the great desert which lies west of the Colorado, and has an extent of 100 miles without wood or water.

I have no interest in recommending one of these routes more than another. I took sheep and wagons to California last year by the Gila route, and I am about to return that way to California again with sheep. Upon the route which I have just traveled, I encountered many hardships and dangers, and met with serious pecuniary loss; yet I say it is the best for a railroad, and would be excellent for ordinary traveling but for the Indians. A large portion of the trail over which I passed—say some 250 miles west from the Rio Grande—is, for the most part, admirably adapted to farming and stock raising.

ARTICLE III.

[From the Mining Magazine.]

Gold and Silver Produced by the Mines of America from 1492 to 1848.

With the exception of statements made by some of the early adventurers of the amounts of gold obtained of the aborigines in particular instances, there is little else than conjecture as to the amount of the precious metals gathered by the early discoverers of America. Humboldt, whose opinion is perhaps entitled to more confidence than that of any other writer, has estimated the average annual amount of gold which America furnished to Europe, from 1492 to 1500, at 52,000*l.* sterling.

According to the accounts of Herrara and others respecting the operations of the early adventurers, the estimate of Humboldt would seem correct for the whole period from 1492 to 1519, when Cortez first landed in Mexico. Up to this period gold only had been found. Twenty years after the conquest of Mexico, that of Peru was made by Pizarro. The process by which the Peruvians had

procured their gold and silver before the arrival of the Europeans was simple, rude, and with little regard to extracting the whole of the precious metals from the ores. The use of mercury was not adopted till forty years after the conquest. The smelting was performed in small portable furnaces, or cylindrical tubes of clay, very broad, and pierced with a great number of wholes. In these the Indians placed layers of silver ore, galena and charcoal, and the current of air which entered the holes, quickened the fire and gave it a great degree of intensity. These furnaces were moved from one elevation to another, according to the degree of high or low wind. When it was found that the wind blew too strong and consumed too much of the fuel, they were removed to a lower situation. By these means the natives obtained argentiferous masses, which were smelted again in their own cottages. This was performed by a number of persons, ten or twelve at a time, blowing a fire through copper tubes, from one to two yards in length, pierced with a small hole at the extremity toward the fire, which thus acted in the same manner as the modern blow-pipe.

The mines of Potosi were discovered in 1545. Several mines had been previously worked, but there is no account of the gold and silver which they yielded. The estimate of Humboldt up to this time, which is adopted by all the leading writers, is as follows:

The annual addition in twenty-nine years, between the discovery in 1492 and the conquest of Mexico in 1521, at £52,000, would amount to	£1,308,000
The amount for twenty-five years, from the conquest of Mexico to the discovery of Potosi, at the annual rate of £630,000.....	15,750,000
Total addition in 63 years.....	£17,058,000

Writers have estimated that the quantity of gold and silver in the old world had been reduced to thirty-three or four millions, and that the supply of the European mines at the discovery of America was equal to that which was annually consumed by wear.

The discovery of the mines of Potosi was accidental. It was made by an Indian hunter, Diego Hualca, who, in pulling up a shrub, observed filaments of pure silver about the roots. The mass on examination was found to be enormous, and a large part of the population was attracted to the spot. A city soon sprung up. The mountain was perforated on all sides, and the produce in a few of the first years exceeded whatever had been recorded of the richest mines of the world.

During the first ten years after the discovery no account was kept of the quantity of treasure obtained, but during the succeeding twenty-three years, from 1556 to 1578, a tax of a maravedi upon each marc of silver was laid. The account of this tax gives as its amount nine millions eight hundred and two thousand two

hundred and fifty-seven peros, and the treasure therefore must have amounted to $49,011,285, or $2,130,925 annually. Humboldt and other writers have concluded that the yield of the mines did not exceed during the first ten years that of subsequent and equal periods. This opinion is based upon the improved processes of amalgamation introduced after the end of the ten years. During the next twenty-one years, from 1579 to 1600, the amount of treasuse according to the tax was $29,185,990; or $1,389,859 annually.

During this period Chili yielded some gold, but the principal supply of treasure came from Mexico. Humboldt is chiefly followed by all writers in the estimate of the annual supply during all this period, which is reckoned at $10,000,000. This in the period of fifty-four years, terminating at 1600, would amount to $540,000,000.

It would be an interesting subject to investigate the influence which this accumulation of treasure had upon the social condition of the inhabitants of Europe. The advance in prices, the rise in wages, the increase of luxury, and the more general diffusion of comforts, are distinctly marked in the pages of history.

The sum which formed the stock of money current in Europe at the latter end of the fifteenth century, is thus estimated by one of the most laborious English writers who has investigated the subject.

1st. The stock existing at the time of the discovery of America	£34,000,000
2d. That produced in the hundred and twelve subsequent years, after making allowance for the loss by wear and tear	138,000,000
	172,000,000
Deducting what had been conveyed to Asia, and what is supposed to have been applied to the purpose of commodities of all kinds	42,000,000
	£130,000,000

This is equivalent to quadrupling the quantity of coin in Europe in the first century after the discovery of America. A conclusion which will admit of great difference of opinion.

After the year 1600 the mines in the district of Potosi in Peru declined greatly. In the first fifteen years of the seventeenth century they yielded $1,670,344; and in the last fifteen years, from 1685 to 1699, both years inclusive, the average amounts to no more than $559,943. This decline is not ascribed to the exhaustion of the mines, but to the cruel conduct of the Spaniards.

During the same period, the district now known as Bolivia, was productive of metals. Mines were opened and worked in Caran-

gas, Oruro, Andacava, and Chaquiapu or La Paz. At the same time, the silver mines in the northern part of Peru at Gauricocha or Pasco, were opened, and yielded a large amount of that metal. Thus although the district of Potosi declined, the other parts of Peru advanced so considerably as more than to compensate for the deficiency. This increase of silver was greatly promoted by the extension of the mines of mercury at Huancavelica. The quantity at first obtained from them was small, compared with that which they reached between the years 1598 and 1684, after which they appear again to have declined. The principal one of these mines became choked up about 1790, which was a great misfortune to the mining interest of South America. The superintendent of that day removed the pillars which had been left by the excavators of the galleries to support the roof. By the superincumbent pressure the roof fell in, and the passages became blocked up.—"The master miners," says Humboldt, "accused the intendant of having removed the pillars to ingratiate himself with the court of Madrid, by procuring in a very few years a great quantity of mercury. The intendant on his part affirmed that he had acted altogether with the consent of the master miners, who thought the pillars might be replaced by heaps of rubbish."

Meantime the increase of gold was taking place both on the north and south of Peru. In Chili the Spaniards and Indians were sedulously employed in washing for gold in those streams which descend from the Cordilleras. The climate and soil, there, are exceedingly favorable to gold washers. "It is usually observed," remarks a traveler who visited that country, "that in those countries where great mineral riches exist, the soil is of a barren and unproductive nature; but Chili affords a striking and almost solitary exception to this rule. Streams abounding in gold wander through the most luxuriant corn-fields, and the farmer and the miner hold converse together on their banks."

At this period some silver, but more gold, was found in New-Grenada, but the principal quantity of gold was obtained in the ravines of the mountainous regions of Antioquia in the valley of Cauca, between the central and western Cordilleras, and especially in the southern extremity of the province of Popyan.

About the year 1630 the mines of Guanaxuato in Mexico were greatly extended, and those of Tasco, Zultepec, Zacatecas, and Pachuca began to improve, and so continued to the end of the century. The ancient documents on the subject of the product of treasure are very obscure, but Humboldt has concluded that the precious metal produced in Mexico so increased between 1600 and 1700, that in the last ten years of the century the mines delivered to the mints, in gold and silver, to the amount of more than five million piastres. It is estimated by Jacobs, that South America, exclusive of Brazil, yielded during the century terminating in 1700,

L. of C.

in conjunction with the produce of Mexico, $10,500,000. Brazil is estimated at another million, and the amount not reported at the Mexican mints, but conveyed away by contraband means, is estimated at $2,000,000. Thus we have an annual yield from all the American mines, of $13,600,000 for the hundred years terminating in 1700.

The following estimate of the coin in circulation at the end of 1699, throughout the world, may be new to many of our readers, and may also serve as a landmark in the progress of our subject.

Stock of coin left at the end of 1599		£130,000,000
Deduct for abrasion and loss in the course of the century past		43,000,000
		87,000,000
Produce of the mines of the world in one hundred years	£337,500,000	
Transferred to India and China...	33,250,000	
	£304,250,000	
Deduct one-fifth converted to other objects than that of coin.	60,250,000	
	£244,000,000	
Deduct for wear and tear.....	34,000,000	
		210,000,000
		£297,000,000

The produce of mineral treasure from this period was slow, but uniform, throughout America, until nearly the close of the century. The great mine of Valenciana, says one of the writers upon this period, which during forty years yielded to its proprietors a clear profit of from eighty-five to one hundred and twenty-five thousand pounds sterling yearly, was neglected until near the year 1760, and after ten years' labor and expenditure, when the richest part of the vein had been reached, continued for upwards of forty years to yield more than half a million sterling in gold and silver. The rich district of Guanaxuato, in Mexico, which in the years before 1766, yielded only three hundred and eighty thousand ounces of silver annually, produced in the latter years of its prosperity more than one million five hundred thousand. The mineral repository of Catorce was only discovered in the year 1773, but it yielded a very large quantity of gold and silver till 1798, when the value of the minerals declined. The vein of Biscaina did not become enormously productive until 1762. In twelve years from that period, the owner of it gained a profit of more than a million sterling, with part of which he presented to the king of Spain two

ships of war, one of them of one hundred and twenty guns, and also lent him upwards of two hundred thousand pounds, which was never after repaid. The mines of Zacatecas, which in 1750 scarcely furnished silver to the amount of more than one hundred thousand pounds, increased in a few years to ten times that amount.

The following is the statement of the product of the mines of Mexico, in gold and in silver, delivered to be coined at the several mints in periods of ten years, reduced to sterling at the rate of four shillings and two pence the piastre, according to Humboldt and Ward.

In the ten years from	1700 to 1709.....	£10,777,298
" "	1710 to 1719.....	13,697,297
" "	1720 to 1729.....	17,131,921
" "	1730 to 1739.....	18,860,355
" "	1740 to 1749.....	23,302,633
" "	1750 to 1759.....	26,197,936
" "	1760 to 1769.....	23,505,012
" "	1770 to 1779.....	34,912,858
" "	1780 to 1789.....	40,318,948
" "	1790 to 1799.....	48,191,711
" "	1800 to 1809.....	47,142,814
		£304,039,783
It is estimated by Humboldt that the gold and silver of Mexico which did not pay the duty to the king was equal to one-fifth of that which did. Taking it at that amount there may be added.....		60,807,956
		£364,847,739
This is an annual average product of		£3,316,706

The greatest quantity of silver from Peru has been extracted from the mines of Pasco. They are in the midst of mountains covered with perpetual snow, and are themselves at a height of thirteen thousand feet above the level of the sea, and, consequently, in a severe climate and a barren soil. They are said to contain masses of silver equal to the quantity found in the district of Guanaxuato in Mexico, and at no great depth below the surface. But the unhealtiness of the climate, the expense of conveying necessaries to such an elevation, and the water by which the pits are often submerged have been impediments to extensive operations. Nevertheless these mines yielded subsequently to 1700, even throughout the century, annually eight hundred thousand ounces of silver. In the province of Truxillo the Hualyayae, Gumachuco and Conchuco mines have been worked since 1772, and yielded annually eight hundred thousand ounces of silver. The ores of the district were said by Humboldt to be richer than those of Potosi.

The gold and silver obtained from the mines in Peru was ordered to be brought to Lima to be coined. No regular returns of the amount are attainable of an earlier date than 1754. The gold and silver which paid the duty on coinage from this date to 1809, was 240,408,058 piastres. Writers upon this subject, especially Jacobs, have reckoned the amount the same for the preceding fifty-nine years, and thus concluded the amount of gold and silver yielded by the mines of Peru for the one hundred and ten years previous to 1810, to have been $480,816,116.

The western part of Columbia has yielded gold from the earliest period, but no silver of account. The gold is obtained in alluvial districts. Veins have been found in the mountains of Guamoco and Antioquia, but the working of them has been neglected. The gold obtained from the washing was coined, and paid duty at Santa Fe de Bogota. In 1801 it averaged 2,500,000 piastres, from which amount it had not varied materially for a long period.

The gold and silver obtained in Chili was coined at the capital, Santiago, where the tax was collected. It amounted to about $850,000 annually, and for the period from 1700 to 1810, it is estimated that the gross yield of the mines and washings was $93,500,000.

Buenos Ayres, which at one time included the mountain of Potosi, had many rich mines about this period, especially La Paz, Carangas and Oruro. The annual product of which is stated by Humboldt to have been $4,2000,000, or in one hundred and ten years $462,000,000.

Bringing together under one view, the products of the gold and silver mines of Spanish America, and regarding the amount of contraband, or which did not pay a tax, we have the following results:—

Peru	£100,169,524
Columbia	57,341,666
Chili	19,532,166
Buenos Ayres	96,250,000
Product paying duty	273,293.356
Product on contraband	68,323,339
	341,616,995
Product of Mexico as stated above	364,847,739
	£706,464,434

But Brazil belonged to the Portuguese, and its product of gold must be added to the amount of gold and silver obtained in Spanish America. In the appendix to the report of the Bullion Com-

mittee of the English House of Commons in June, 1810, there is an account of the product, or duty of one-fifth, from the 1st of August, 1751, to December, 1794, for the two greatest mining provinces of Brazil, those of Minas Geraes, and of Minas Novas; and also of the district of Goiazes. By this statement, it appears that there was a decrease in the amount of the quintos on gold as follows:

	Arobas.	Mures.	Ounces.
Annual average from 1752 to 1762.....	104	7	5
" " 1763 to 1773.....	90	3	1
" " 1774 to 1784.....	69	20	4
" " 1785 to 1794.....	45	41	5

Thus the tax of one-fifth the weight amounted to 3,369 arobas of gold; the value of each aroba in sterling is £1,821 17*s.* 4*d.* Consequently, the whole amount produced from the mines in fifty-one yeas was £30,719,335. The yield of the other mines for the same period is estimated at £9,281,665.

The only method without statistics, which do not exist, by which to arrive at the results of the preceding period of fifty-nine years, is through an investigation of the commerce of the period, with all those incidental circumstances which have a degree of influence upon it. After such an investigation, Jacobs, among other writers, has reckoned the amount produced as equal to that of the subsequent period, and the total from 1700 to 1810 at £80,000,000: thus

Spanish America.....	£706,464,434
Portuguese America.....	80,000,000
	786,464,434
Or an annual product of.....	£7,146,767

Since the commencement of the present century, the product of the mines originally of Spanish and Portuguese America has rapidly declined. This has been in consequence of political disorders and wars, and not from any failure in the mines. Thus in Mexico, the money coined at the mint in 1809 was $26,172,982 in gold and silver; but in 1812 it had declined to $4,409,266. In Guanaxuato, according to Mr. Ward, the amount of the precious metals diminished from 8,852,472 marcs of silver, and 27,810 marcs of gold, the product of fifteen years preceding the revolution, to 2,877,213 marcs of silver, and 8,109 marcs of gold. The mines of Sombrerete declined from five hundred thousand to three hundred thousand annually. The product of the mines of Catorce, which was second only to that of Guanaxuato in the amount of silver raised, being nearly three millions of dollars annually, was so reduced as to yield, on the average for the fifteen years of the revolution, $599,400. The Bisciana vein, which yielded $857,042

annually, declined during the period from 1809 to 1823, to $14,285 annually. In each district the principal mines, with a single exception, were abandoned; the machinery was allowed to go to ruin, and the silver raised was merely the gleanings of more prosperous times; the workings were confined almost entirely to the upper levels. Reports have been made of the quantity of money coined at the four mints between 1810 and 1829, including both gold and silver. This amount is $220,403,183.

The produce of gold and silver in Central America was always included in the returns from Mexico previous to 1820. At that time a mint was established, which, up to 1829, had coined about $2,893,710.

The entire amount of gold and silver supplied by the late Spanish dominions in America, for the twenty years terminating in 1829, is thus estimated:

Mexico	$220,043,200
Guatimala	2,893,710
Columbia	33,564,267
Peru	64,688,429
Buenos Ayres	30,000,000
Chili	16,618,880
Brazil	19,892,400
	$387,700,886
Or at 4*s*. 2*d*. the dollar	£80,736,768

As early as 1824 gold was found in North Carolina; to wit, 1824, $16,000; 1825, $17,000; 1826, $20,000; 1827, $21,000; 1828, $46,000; 1829, $128,000. Also in Virginia, South Carolina and Georgia, small quantities were found at the same time.

A recapitulation of the amounts thus far stated, presents the following results of the produce of precious metals from the mines of America.

From 1492 to 1600	£130,458,000
1600 to 1700	337,500,000
1700 to 1810	786,464,434
1810 to 1829	80,736,768
	£1,235,159,202

We have thus far followed chiefly the estimate of Humboldt and Ward and Jacobs. Some discrepancy must necessarily exist in the absence of positive reports, between the results of every investigation.

For the following tables we are indebted to M. Michel Chevalier's *Remarks on the Production of the Precious Metals.*

Total Production of the Silver and Gold Mines of America prior to the Discovery of the Gold Mines in California.

Countries.	Silver.		Gold.		
	Weight in Kilogrammes.	Value in Millions of Francs.	Weight in Kilogrammes.	Value in Millions of Francs.	Total for each country in millions of Francs.
United States	.....	.....	22,125	76	76
Mexico	61,985,522	13,774	389,269	1,341	15,115
New Grenada	259,774	58	566,748	1,952	2,010
Peru } Bolivia }	58,765,244	13,059	340,393	1,172	14,231
Brazil	.....	.....	1,342,300	4,623	4,628
Chili	1,040,184	251	250,142	862	1,098
Total.....	122,050,724	27,122	2,940,977	10,026	37,148

Quantities of Gold and Silver supplied to the European Markets by the undermentioned Countries during three centuries ending in 1848.

Countries.	Silver.		Gold.	
	Weight in Kilogrammes.	Value in Millions of Francs.	Weight in Kilogrammes.	Value in Millons of Francs.
Europe, exclusive of Russia	9,000,000	2,000	445,150	1,500
Russia.....	1,485,000	300	319,330	1,100
Africa and the Islands of the Malay Archipelago, &c.	.....	.....	725,750	2,500
Total.....	10,485,000	2,300	1,490,230	5,100

In the third volume of the London Mining Journal, p. 331, we have the following statement as to the produce of the precious metals: "In 40 years, from 1790 to 1830, Mexico produced 6,436,-453 l. of gold, and 139,818,032 l. of silver. Chili, 2,768,488 l. of gold, and 1,822,924 l. of silver. Buenos Ayres, 4,024,895 l. of gold, and 27,182,673 l. of silver.

The following table shows the annual product (approximate calculation) in value of fine gold and silver for 1846 and 1850, the former being two years before, and the latter two years after the discovery of the gold mines of California.

	1846.			1852.		
	Gold.	Silver.	Total.	Gold.	Silver.	Total.
	£.	£.	£.	£.	£.	£.
California.....	.....	.....	.....	12,000,000	62,088	12,062,078
United States..	237,336	1,864	239,230	115,430	11,444	126,854
Mexico.....	249,753	3,457,020	3,706,773	382,901	5,383,333	5,766,234
New Grenada..	252,407	42,929	295,336	252,407	42,929	295,336
Peru.....	96,241	1,000,583	1,096,824	96,241	1,000,583	1,096,824
Bolivia.....	60,337	460,191	520,548	60,357	460,191	520,548
Chili.....	145,585	296,029	442,614	145,585	297,029	442,614
Brazil.....	259,871	2,003	261,874	289,068	2,227	291,295
Total of North & S. America	1,201,560	5,261,619	6,563,179	13,341,989	7,259,824	20,601,813

Article IV.

Address of Uriel Wright before the First Agricultural Fair in Missouri.*

Mr. President:

I am here to-day by your appointment, to speak for the cause of Agriculture. The scene around me proclaims your interest in that cause, and I share it with you, but in degree and quality how different!

It was not my good fortune to start in life in partnership with this fertilizing atmosphere and this teeming earth. My way has been along that path, which runs over violated contracts and broken laws, a path too often darkened by the fierce conflicts of human interest or the bitterer warfare of human passions.

My business is to deal with man in strife with his fellow-man, or at war with the government in which he lives. I stand at the point where the antagonisms of society meet—where vice is most active, and frailty most conspicuous—whither human beings coming from all the diversied pursuits of life throng, in countless numbers—some to have justice awarded them, some to inflict its opposite, and others, an unwilling group, to expiate offences.

In seeking to be one qualified to mingle in such scenes, my vision has been almost shut out from the broad, bright fields of nature. The laws of vegetable life do not lie within the narrow circle of legal science. Advocates at the bar, Judges on the bench, do not teach how a plant must grow, on what it must be fed, and how, if sickness seize it, it must be cured. They look at soil only to determine *boundary* and title. They do not interrogate the earth to find out its ingredients—they put no questions to the air to discover its elements. The law has its mysteries, but the "mysteries of the hail" and snow, of the dew, and rain, are not of them.

But although thus cut off by vocation from the pursuit and study of Agriculture, I yet am interested in its prosperity.

It claims my regard as the earliest and noblest occupation of man. It appeals to my interest, as the supporter of every other interest in a State. As a man claiming to be civilized, I venerate it as an essential element in all civilization. As an American I hail it as the surest defender of the liberty of my country. By these more general claims I stand connected with the occasion and its theme—but you are united to both by closer ties.

* We commend the following able address to the careful perusal and study of every citizen of Missouri. The subject lies at the foundation of all civilized States; and the benefits derived from improvements in agriculture are not less important to the inhabitants of cities than to those of the country. Therefore, the subject of agricultural education addresses itself to the merchant, manufacturer and mechanic with as much propriety as to the farmer.

To you, Agriculture, as an art or sciedce, can never become an abstraction; you look upon it always in the concrete. The strong tie of interest binds you to the soil, and your success in life depends upon its proper culture. The subject comes home to your bosoms and business. How to sow? and how to reap? are questions which have their origin not only in your vocation, but in your relations also. As husbands, fathers, masters, you put such questions, and the noblest feelings of your nature become interested in the reply. On that reply may depend your ability faithfully to discharge the duties incident to those relations.

The Government has given you a large discretion, as to the manner in which such duties shall be discharged, but the broad confidence of our laws does not impair the obligation of that trust. How your children shall be reared, educated, and fitted for success in life, and for bearing their part in the maintenance of constitutional liberty, is not penned in any statute of our State. The law of the domicil is with us an unwritten code. We trust the instincts of nature, enlightened by civilization, liberty and religion—we impose no sanctions for the breach of them. But beyond these endearing relations (furnishing, as they do, active stimulants to enquiry,) your broader relation to all other pursuits and avocations, imposes upon you the duty to know everything that may advance the cause of agriculture. The soil untilled for a single year would spread famine over the earth! Your philanthropy asks for knowledge—your interests demand it—your affections in their loftiest yearnings crave it.

The daily mysteries of vegetable life around you make knowledge a necessity.

These are some of the considerations which have brought you here to-day, to *the first industrial exhibition of the first Agricultural Society ever organized within our limits under the patronage of the State.*

I wish I could bring the tribute of knowledge to this beginning of a new era in the history of our agriculture. I would seek no higher honors than to identify my name usefully, with a movement of the human mind, directing the energies of our people, and the authorities of our State, on that line of achievemnt which may elevate the art of agriculture, in its widest scope, to the dignity of a science.

I feel, sensibly feel, that to me such honors can never attach; but I trust that I may not entirely fail *to show that the highest attainments of science are yet to be won from the soil she has neglected; and that the highest duty of the State is to place agricultural education within the reach of all her sons.*

I leave behind me many topics upon which I have refledted with pleasure—intimately connected with my theme. I pass by many inviting fields, which have allured thought, since I accepted your invitation, and proceed to the consideration of the two propositions just advanced. In a single address, I do not know how better to appropriate the time allotted me in this interesting scene.

And first—Can science be successfully applied to agriculture? Is all known that can be known, which tends to multiply the fruitfulness of the earth, and perpetuate its fertility? Are the laws of vegetable life within the reach of the human mind, and if so, will a knowledge of them aid the agriculturist in the practical operations of husbandry?

I put the subject in the interrogative form, because I know that a wide prejudice has already answered—It is a prejudice hoary with age. It has entered the halls of legislation, but is not the peculiar possession of that class of politicians, who do not rise to the stature of philosophic statesman. Unhappily by a hurtful contagion it has spread to some, themselves tillers of the soil.

Now a small portion of this prejudice must be treated as a disease of the mind, which no sanative can heal; but much the larger part of it rests upon plausibilities, within the reach of correctives. Some of this error may yield to the unaided power of a definition.

Science is *not* merely theory—nor is it mere practice. It is neither speculation, nor experiment. Science is *knowledge*. It may be reached in many ways—sometimes by a blunder—oftimes by accident; or it may be won by the harder and noble toil of the mind working by the rigid process of induction through series of experiments; but however attained it is *power*—power magnifying the resources of man and convertible to his use. Every successful farmer is to some extent a *scientific* one. There cannot be continued success in farming against the laws of nature. Whether he knows it or not, he has in the given case applied labor in harmony with these laws. To maintain otherwise, is to rebuke the intelligence of God.

The widest prejudice against the application of science to the art of agriculture, has arisen from confounding *science* with the operations of men who have gone to the fields, book in hand, trusting to reach judicious culture by a prescribed formula. I deliver over all such sciolists and smatterers to the appropriate awards of a poetical justice. If the "book farmer" has not succeeded, his failure was the result of one or more of three causes: First, the book did not contain the requisite science or knowledge; second, if it did, the farmer did not find it out; or third, he had not the practical experience or industry to apply the knowledge the book contained. I join in no crusade against books. They have been, and are, and will be in all coming time, the repositories of science. They are the caskets which contain the jewels of the mind, wrought by genius in every age. Yet unlike other caskets, while they collect they distribute also.

But, gentlemen, that would be indeed a rare book—invaluable as rare—which contained *all* the science necessary to the farmer. The art of agriculture demands the aid, not of one only, but of many sciences. The aggregate fills the entire circle of the natural sciences. The elements of agriculture have rested on botany. The indications of vegetable physiology have been, and yet are, the chief guides of the practical farmer.

Mechanics and hydraulics, are as essential to his yearly operations, as the seed he sows. Geology only, can accurately teach him the origin of his soils, the cause of the diversities which they frequently exhibit, not only in the same farm but sometimes in the same field, the nature and differences of his subsoil and the advantages he may expect in bringing them to the surface.

Meteorology makes for him her tables, showing the highest, the mean and the lowest temperatures, and also the quantity of rain that falls during each day and each month of the year—knowledge eminently useful for the proper culture of the land. While chemistry discloses the composition of soils—the composition of the atmosphere—the food upon which every plant must live—from whence obtained—whether from the earth or the air—the deficiencies of soils, to the growth of plants—and how the deficiency may be supplied, and when—the adaptation of particular soils to the growth of particular plants—the causes of exhaustion of soils—the means of restoration—when nature will supply deficiencies—and when man must do it for her, and how—the principles upon which alone, a judicious rotation of crops can be applied to a given soil—in a word, the office of chemistry is to explain the processes of vegetable life, in every stage of its being, and to show forth the results of decay and death. To this science agriculture must ever look for its highest achievements; other sciences may be important auxiliaries in every step of her progress; but chemistry must conduct her to prosperity. However dissevered, as they have been; however strife and ill-feeling may have come between them; however jealousy and ignorance may have disturbed their union, agriculture and chemistry are inseparably united; and what God hath joined together let no man put asunder.

Look at the art of culture as it now obtains in our country, is it not essentially a chemical art? You put lime, or gypsum, or guano on your land—what are they but chemical agents? and why do you add them to the constituents of your soil? Is it not solely from the hope of chemical action? If you drain your meadows, or irrigate them, are you not seeking chemical action? If you subsoil—what are you in search of but chemical action? If you let your fields lie in fallow—what are you waiting for, but chemical action? If instead of rest you practice rotation in crops—on what principle can you explain your practice other than upon the laws of chemical action? Even your mechanical operation of plowing—what is it, but a means of inducing or facilitating chemical action? And when you come to the composition of your manures, whether vegetable, or animal, or mineral, or all combined, you are engaged in that which demands a large knowledge of the laws of chemical action. Knowledge of the constituents of your soil—knowledge of its deficiency—knowledge of what will supply that deficiency—and knowledge how, and from what source that supply shall come.

It is thus manifest beyond the reach of cavil—that the agriculturist, whether he knows it or not, and in spite it may be of the profoundest ignorance of chemistry, is nevertheless practically a *chemist*.

Will a knowledge of chemistry help the experimenter to his desired result? Ought he to rely upon the ascertained and established truths of science, or trust to chance? That is the question—that is the question. The question of this hour—the question of this age, put by me, with a gravity due to its importance—to every agriculturist in the land—to all who are indirectly interested in the pro-

ducts of the soil and to the public authorities. Upon a question so vital to the State—so big with results—so full of weal or woe to us in our day and generation, and especially to those who shall come after us. I would invoke the shades of our mighty departed for an answer. If it could be, Fort Hill and the Hermitage, Marshfield and Ashland, Monticello and Montpellier would each find a tongue, and rising high above them all, the solemn, benign and parental voice of Mount Vernon would give power and emphasis to the joint reply. Do you doubt what that reply would be? Differing widely as to the actual adjustment of powers in our Federative system, and sometimes apart upon the measures of policy—no dissension ever came between them as to the true position of agriculture. They loved the fields, and with a love that defied the intoxicating influences of power and the seductive spell of high station. Their graves are *farmers'* graves. At the Capitol, amidst cities, on the summits of mountains, cenotaphs and mausoleums speak in enduring marble the nation's gratitude, *but their bodies moulder in the soil they tilled.* When was it in their lives that a sentiment escaped from either of them adverse to the healthful influence of science on culture?

In their day and generation, amidst the monopolizing cares of State, when did either of them lose an opportunity to avail himself of any achievement of the mind calculated to increase the fertility of the earth? Or when did they fail to give to Science, on her pathway of toil, a cheering word? They were philosophers as well as statesmen, and in the quietude and repose of their fields—in that "solitude" which is "the school of genius" in the contemplation of Nature working out in her mighty laboratory, the processes of vegetable and animal life—their minds expanded to the measure of true greatness.

Some of them were surrounded by a philosophical apparatus, and worked in their *home* laboratories. Mr. JEFFERSON, while minister at the French court, found time amidst the engrossing cares of diplomacy, not only to watch the throes of a revolution, but to make himself master of every new discovery in science. The interest of agriculture engaged his special attention; every new implement of husbandry—every new mode of culture—every plant useful to man not grown in our land, became the object of his regard. His well known journey through the interior and south of France, and over the ranges of the lesser Alps, had for its motive the pursuit of scientific agriculture. If in that day an agricultural school or college could have been found in France or Switzerland, who can doubt that he would have been drawn to it by an irresistable attraction. Mr. Madison on his skillfully conducted farm, up to a late period of his life, kept pace with every advance of chemistry. His letters—the letters of Washington and Webster—form a beautiful and instructive portion of our agricultural literature.

But I turn from these bright names to call you back to your own farms, and to your own operations in husbandry.

You put gypsum on your land. In one district of country its effects are lauded, in another its efficacy is doubted, while in a third it is decried. How is that? and why is it? Is it the freak or fickleness of the mineral? Is the result in each case a chance medley? or does it spring from cause? Just so sure as that the earth we inhabit moves in its orbit round the sun by *law*, so sure is it that the result in each case is the effect of principle, and that principle science can discover.

Again, you put upon your soil animal manure—you find its action powerful and its effect permanent. Other animal manures act only for a time, and their effect is speedily exhausted. Do you know the cause? Chemistry can answer.

"Does a mixture of animal and vegetable manures prepare your land best for certain kinds of grain? Do you employ common salt, or nitrate of soda, lime, the ash of wood, bone dust, or any other substance with, advantage? In all these cases you observe chemical results, which you would be able to control and modify did you possess the requisite chemical knowledge."

Some barren soils are capable of reclamation—others not profitably under the present state of science. Is it not a matter of importance to be able to distinguish between them? But what is more particularly applicable to us—some soils that to the eye seem good will not produce. Now, by what rule will the common farmer work to give fertility to such land? Has he any rule? Ignorant of the disease, how shall he apply the remedy? Shall he experiment in the dark and work on as the sanguine Micawber lived—"in the hope that something will shortly turn up?"

By a beautiful economy in nature, many of the inorganic elements necessary to the growth of plants exist in the soil in quantities so small as to become appreciable only by a refined analysis. How shall the practical farmer detect their absence by the best use of his powers of observation? I repeat the question—how shall he work? Blindly in the dark? or growing tired of unprofitable toil, shall he shift the responsibility by selling out? or shall he call upon science to tell him the exact chemical constitution of the earthy part of his soil? Perhaps the reply of the chemist may be—"Your soil is excellent, and wants only a small portion of what is known to science as phosphoric acid, which you can supply at little more than nominal cost." Or perhaps he may suggest the presence in the soil of some one of the salts of iron, or other noxious principle easily and cheaply deprived of its hurtful influence by the application of well known chemical agents. In reference to such soils Sir HUMPHREY DAVY more than half a century ago, when agricultural chemistry was comparatively unknown, said—"the application of chemical tests to such soil is obvious—it must contain some noxious principle," (or be deficient in some necessary element, adds JOHNSON thirty years later,) which may be easily discovered and probably easily destroyed. Are any of the salts of iron present? they may be decomposed by lime. Is there an excess of silicious sand? the system of improvement must depend on the application of clay and calcarious matter. Is there a defect of calcarious matter?—the remedy is obvious. Is there an excess of vegetable matter indicated?—it may be removed by liming, paring and burning. Is there a deficiency of vegetable matter?—it is to be supplied by manure." Since his day soils are better understood, and in many cases chemistry can now accurately determine what a soil must contain before it will produce a given crop.

In our own country the value of chemical tests applied to the soil is abundantly established. I cite a few examples out of many furnished me by your Secretary, my friend MINOR, to whose enterprise and zeal you and the State are largely indebted for your present organization.

In the Agricultural Transactions of the State of Massachusetts for the year 1851, (a book which I would commend to those engaged in diffusing agricultural literature among our people.) I find recorded some authentic facts which illustrate the matter in hand. Professor MAPES, a gentleman of large attainments in various departments of science, furnished the results of the analysis of the soils of more than one hundred farms in the State of New Jersey. Take two or three of them:

He analysed the soil of a field of J. J. SCOFIELD, of Morristown, on which the owner desired to raise ruta baga turnips. It was found deficient of the following constituents of that crop: phosphate of lime, potash, organic substances, including a slight quantity of animal matter. These being supplied, the result was fourteen hundred bushels to the acre, as certified to the Legislature!

He also analysed the soil of a field of Dr. JNO. WOODHULL, which he had appropriated to the growth of wheat, and from which he had the preceding year obtained less than fifteen bushels to the acre. After supplying the deficient constituents, he obtained, the succeeding year, fifty-seven bushels to the acre.

Another instance I cite, to show the value of subsoiling, under scientific direction. The farm of ROBT. RENNIE was deficient in its surface soil. Its subsoil by analysis proved to be rich in substances not contained in the surface soil. He prescribed subsoiling and a thorough mixture of upper and lower soils. The preceding crops were fifteen bushels of corn and sixty bushels of potatoes to the acre, but the succeeding one hundred and fifty bushels of ears of corn and three hundred and fifty bushels of potatoes. Once more: a field of a gentleman in Maryland had become barren under culture. It was reduced to a yield of one bushel per acre. He applied to a distinguished chemist, who on analysis, detected the absence of *but one* element of fertility—phosphoric acid. That element was supplied and the product was twenty-nine bushels of wheat to the acre. It is needless to multiply examples—these establish the connection between science and agriculture—but the union must be more complete.

I value at a high rate the practical skill—obtained by a long course of observation, possessed by many of our farmers—common sense, sound judgment, have done much for the soil, aided by little exterior information; and the light of Science will never dispense with the use of such qualities; but we cannot shut our eyes to the fact that, under our present system of culture, the soil of our country is undergoing exhaustion. Its richness, in the Valley of the Mississippi, will postpone the ultimate period of barrenness, but it must be witnessed by

those who shall live upon the earth when we have passed away, unless the process of exhaustion be arrested. The law of *supply* and *demand*, explains both the evil and its cure. That law is the great, primary law of Nature. Why does this noble river, on whose banks we stand, roll in ceaseless and perpetual flow on to the ocean? Whence comes its eternal supply? Ask the sea and the sun and the cloud, and they will answer. In this invisible air around us, are four elements, without which there can be no living thing—neither vegetable nor animal. Without them there must be universal death. Every moment in our lives we must have them, and so must every plant. The vegetable and animal kingdoms are the active, ceaseless, eternal consumers of these commodities. Why are they not exhausted? Why is it that the atmosphere, everywhere, still furnishes a supply to this never-ending demand? Go to Pompeii—dig up from its ruins a vase which has been covered by the lava of Vesuvius for eighteen centuries—analyze the air it holds—and you will find in it the exact amount of oxygen contained in the same volume of atmosphere that plays around the highest peak of the Alps. Whence is this universal supply? The answer is; every animal that breathes, at every breath, absorbs oxygen and gives out carbon, while every plant in its respiration, takes in carbon and gives out oxygen. The indestructibility of matter, perpetuates this exchange of the two kingdoms through an eternal circle. This is the operation of organic *life*, but decay and death are pledged to the same office of restoration. Burn a plant in flame, and it disappears—all save its ashes. In life its substance was mainly composed of the four elements—oxygen, carbon, hydrogen and nitrogen—and these it drew from the air, while it contained also small portions of several substances which it did not get from the air. Now, in the process of combustion, death comes, and at the moment of dissolution, every element is set free, and what is beautiful, each element knows its place, and whither it must go. The elements of air have gone to their home, and what came from the earth is left upon it.

In regard to the laws regulating the supply of nitrogen—an element which in the form of ammonia—is so intimately connected with vegetable life, as to claim the special attention of the practical farmer—there is more uncertainty. Whether the atmosphere be its *primary* source, as most chemists conclude, or whether LIEBIG be right in his conclusion, that "is it a part—a *primary constituent* of the globe itself"—all chemists are able to trace the various secondary sources of supply of this essential fertilizer, and all concur in showing, that *upon man devolves a large portion of the work of restoration.* It is the great office of science to distinguish between the cases in which nature does, and does not, need the aid of man. Her processes are of themselves sufficient for her purposes—she can clothe the earth in verdure—and by decay and death she renders that verdure perpetual—but man tasks her powers, and by continual drafts on her fertility, he may reduce her to barrenness. To prevent this, what she demands of man, is, that after he has used what he has taken from the earth, he shall bring it back to her exhausted bosom, or if he will not do that, let him go to her magazines of supplies, wonderfully and bountifully provided, to meet the exigencies of his improvidence. The immense coal fields which lie imbedded in the earth, of vegetable origin, furnish a sample of her prudent forecast and care. The nitre beds of India and South America, are other instances—and in our own country, on the shores of Lake Champlain, in New Jersey and New York, beds of phosphorite have been discovered, more valuable than mines of gold. To supply what they furnish England expends a half million of pounds sterling every year. She sends her ships abroad, to other countries, and digs for bones on the field of Waterloo. And nearer to us the Mammoth Cave in Kentucky, constitutes an inexhaustible nitrate reservoir. I venture to predict, that one of the proudest achievements of science, will be to convert the yet undeveloped resources of the mineral kingdom into the richest and cheapest fertilizers of the soil. I venture also to affirm that science, will never reach her highest attainment for agriculture, until she has perfected a system of *specific* manuring—that is, a system of manuring, by which one or many chemical agents shall be classified and adapted to the supply of a given deficiency—or the correction of a vicious quality of the soil.

General and indiscriminate manuring must, as it seems to me, give way as science advances. The ordinary mode in which farmers supply nitrogen, is by the manure pile, collected from the stable, and the barn-yard; and animal manures are richest in this particular substance--but in them it takes the form ammonia, and ammonia has wings so nimble, that they need clipping. Science

only can perform that operation well. There is something very curious and interesting in nitrogen. It presents an anomaly in nature. If it had anything to do with the affairs of State, some politicians would affirm that it presented the beau-ideal of what is sometimes called a "masterly inactivity"—others might maintain that it was a happy illustration of the "manifest destiny" doctrine; while an ardent Whig would be sure to claim it as a "conservative and against intervention"—it would become a Taleyrand in politics, and could live, in favor, under every dynasty. In the air it is in the midst of very active, and combustible agents, that have a wide range of affinities, prompting them to unite with many substances—but nitrogen is characterised by its utter indifference to all other substances—it has an apparent reluctance to enter into combination with any of them.

Whenever by the force of circumstances it is compelled to unite with something else, it remains in union, only because of its tendency to remain in the same place—and the slightest cause will disunite it from its compounds—yet it is an invariable constituent of plants, and during their life, is subject to the control of their vital powers; but the moment the mysterious principle of life ceases to influence it, it disengages itself, and promotes decay by its escape. It forms much the largest portion of the atmosphere, and saves nature from total destruction, by the check which its indifference opposes to the activity and energy of oxygen. It is the great conservative power of nature—but its disposition to be released from all other substances, and the slight force necessary to its escape, demand the minutest care of the practical farmer, when he wishes to restore it to his soil. This gas and hydrogen form ammonia—and the votatility of the ammonia of animal manure must be *fixed*, or you can never cart it to your fields. The agency of man in the supply of nitrogen, is a clear necessity. It is doubtful whether the nitrogen of the atmosphere, either as gas or in solution in water, ever enters *directly* into the living plant. If at all, it does so in quantities too small for its supply. It comes to it in the shape of compounds, as ammonia, nitric acid, and other compounds, some of which are produced by the decay of animal matter.

The volcanoes of the globe furnish ammonia—the consumption by burning of coal fields contributes indirectly to the supply of nitrogen. The electricity of the atmosphere aids in its production—but the farmer cannot rely upon these operations of nature for supplying the continued demand for nitrogen created by continued cultivation. Animal life is a great consumer of this element. The fields are exhausted of it by the demands of cities, crowded with population, and, unhappily, what is thus carried away never returns. Lastly, this element is much less abundant in nature outside of the atmosphere than any other of the organic elements.

The supply of the remaining element, hydrogen, is not, in any important respect, dependent upon the agency of man. Its main source is water, in its various forms, and the artificial application of this bountiful fluid, to the garden and the field, seems to be the limit of man's action in the premises.

I pass from the elements of air to those of earth. When a plant is submitted to flame, we have seen its organic elements are given back to the air, while an *ash* remains which fire does not destroy. This ash constitutes the inorganic portion of plants. It forms so small a part of the plant, that for a long time it was supposed this organic matter, derived from the soil, was accidentally present, and could be of no essential or vital consequence to the plant. Science has for ever expelled this error. Careful experiments have shown—

1st. That on whatever soil a plant is grown, if it shoots up in a healthy manner and fairly ripens into seed, the QUANTITY and QUALITY of the ash is nearly the same; and

2d. That though grown on the *same soil* the quantity and quality of the *ash* left by no *two species of plants* is the same—and that the ash *differs* more *widely* in these respects the more the plants differ from which the ash is derived.

It is thus certain that these inorganic constituents contained in the ash are essential parts of the plants—that they cannot live a healthy life and come to perfection without them—and the practical consequence is that the farmer must supply these inorganic substances to every deficient soil. If anything was needed to make this conclusion absolute, it was supplied in the experiment which establishes that if you take a healthy young plant, and place it on a soil where it cannot obtain this inorganic matter found in the ash of the mature plant of its species, it droops and dies.

Who in view of this great truth, can deny the importance of Science to Agriculture? It establishes a clear relation between the kind and quality of the crop—and the chemical composition of the soil on which it grows.—It makes it as easy to know how to feed a plant as to feed a sheep. It shows how some manures permanently fertilize a soil, and how some crops permanently impoverish it. It explains the action of mineral substances upon plants, and how the dead earth is turned into food for the living. It shows what a soil must contain, and thereby how it must be improved. It is a truth that must ultimately control all the important operations of husbandry. It is not confined to the fields or the meadows. It can be carried to the orchard and the garden.—The root of a tree selects from the soil the *kind* and *quality* of inorganic matter required for its life. Any other tree may be grafted upon it, provided it requires the same kind of inorganic substance in nearly the same proportion in its natural state. On the orange the lemon will grow—because the inorganic food of each is nearly the same—but the fig and grape cannot be engrafted on the orange tree. They need more lime, and potash, than the orange wants for its life—and the air cannot furnish them to the graft. The dependence of the graft for its inorganic supply, is on the roots of the tree upon which it is engrafted.

These inorganic elements, identified with vegetable life, are twelve in number, found generally in combination with each other, or with oxygen. And here, the agency of man is a fixed necessity. Over this wide field of science it is not my purpose to pass. I do not know how to tread it, but I know that chemistry over every foot of that way, is the best guide of the practical agriculturist, even where his steps are most familiar—and that if he will follow her, she will conduct him to triumphs to be won on paths never by him trod before.

Chemistry is young, her step is cautious, but firm, and her progress sure. She holds the key which unlocks the mysteries of nature, and her mission is to open to the gaze of man the wonderful and varied adaptations of the earth, and air, and sea, provided for his use. In the beginning God gave man dominion over the physical world, and chemistry must explore and survey the extent, and show forth the riches of his kingdom. She does not work as the Alchemist worked—she does not toil to find out in matter a quality which God never bestowed upon it. Her business is with the practicable and attainable. She learns the properties and uses of matter, and brings her acquisition as an offering to the varied pursuits of man. She opens the medicine chest of nature to the Physician—she furnishes a safety lamp to the miner in his pit—she puts a mask on the face of the needle-maker which, charged with loadstone, winnows from the air the metallic dust, destructive to his life. She enters the foundry and the workshop—the distillery and the artist's studio—the pottery and the printing-room—the mint and the manufactory—and wherever she enters she brings the tribute of knowledge. But though she wanders thus, on her mission of benevolence, her widest domain is in the field of husbandry.

It is not surprising that our farmers lack knowledge in Agricultural Chemistry. Chemistry itself, has not lived one hundred years as a science.

Agricultural Chemistry is much younger. Sir HUMPHREY DAVY died in 1829; his lectures before the Royal Society of Agriculture in London, [the first serious effort in that department of science] were delivered about fifty years ago. Organic Chemistry is of still later date, and Geology has only within this century taken position as a science.

Agricultural chemists themselves differ on some propositions of the highest practical importance, and they have yet before them a wide surface in nature unexplored. All human science is progressive, and the sciences of observation, [of which chemistry is one,] are peculiarly so. But it may be safely said, that of all sciences known to man, the advances of chemistry have been the most rapid since she took her place in the circle of the sciences. Her power of analysis, while it opens to her the most hidden laws of nature, secures to her results the certainty of which belong to the exact sciences. A chemist may err—he may attempt to deduce a law from facts too limited in number, or character; but his imperfect or erroneous generalization cannot long escape the scrutiny of his own or others' experiments. The conflicts of opinion now going on among the distinguished chemists of the world, in regard to some of the processes in nature connected with vegetable and animal physiology, will end in knowledge.

The practical farmer, by his carefully ascertained facts, will aid the chemist at his crucible, and the chemist will bring back to the farmer knowledge of the laws by which nature works in the field of husbandry. This knowledge is indis-

pensable. Every farmer is in partnership with the atmosphere and the soil. Like every partnership, it is a relation of trust and confidence—and, as in every other partnership, the farmer ought to know the duties of the other members of the firm as well as his own. He should know the work assigned to each of his copartners, and how they work, lest he may counteract their labors by his own—and he should also know when to rely upon them, and when not. More than all, when they call upon him for assistance he should know how to furnish it. It is not my hope to see every farmer a chemist, so skilled as to be able to analyze the constituents of a plant or the ingredients of his soil. That is not my expectation. But I trust the day will come when the constituents of every plant grown by our farmers will be known, and the ingredients of every soil on which they are grown, shall be known also. My hope is, that this knowledge will be diffused and rendered familiar, so that it may be applied by every intelligent agriculturist in the State. Astronomy calculates the rise and set of the sun and moon, and the periods of eclipse; and the world appropriates the results of the astronomers. NEWTON discovered the law of gravitation, and men who are not philosophers, realize the idea and apply it in a thousand modes of usefulness. Genius finds out the hidden power of water as a propeller on the sea and on the land, and now the locomotive and the steamer are the common engines of the world. And thus shall it be with the offerings which science shall bring to the art of husbandry.

[To be continued.

DEPARTMENT OF INTERNAL IMPROVEMENTS.

Warsaw and Rockford Railroad.

We have regarded the Warsaw and Rockford Railroad, and the Central Military Tract Railroad as among the most important lines in the great system of public improvements concentrating at the city of St. Louis; but it appearing from our observation that every attempt on the part of the public press of this city, to give direction or encouragement to any scheme of improvement in Illinois, was offensive to the people of that State, we have refrained from noticing these works, lest we should do them an injury instead of a benefit.

We deem it fortunate for the commerce of the Mississippi valley, and especially fortunate for the city of St. Louis, that there is a reasonable prospect of securing the construction of the Warsaw & Rockford railroad by the subscription of so small a sum as $200,000, and we sincerely hope that the appeal in behalf of this work, which we publish below, will receive that degree of consideration which its importance demands.—*Editors W. J. & C.*

St. Louis, November 3, 1853.

The undersigned, beg leave to call to your attention, as briefly as possible, a few facts, showing the importance to St. Louis of the Railroad, proposed to be constructed under the charter of the

Warsaw and Rockford Railroad Company. The Report of the Engineers made last June, with the map accompanying, shows the general outline, but as this was founded, to some extent, on a simple reconnoisance of the country, it was thought better not to present the subject to the people of St. Louis, until actual instrumental surveys had been made to demonstrate the truth of the estimate. These surveys have been made, under the particular management of W. R. Kingsley, for some time the principal assistant of the Pacific Railroad, and by late report to the Board of Directors, fully confirms the estimates made in the original report.

The Warsaw and Rockford Railroad is designed—

1st. As *one* of the improvements in the navigation of the Mississippi river, by connecting *at all seasons* the foot of the lower rapids, with the head of the upper rapids, a distance of about 120 miles.

2d. By connecting the river with the different Railroads now in progress of construction, east and west (four in number), above the rapids, to make them to a certain extent tributary from the east to the Mississippi river, for the business that naturally should pass north and south.

3d. By connection with the Illinois Central Railroad Branch at Galena, and with the Fon du Lac Railroad in Wisconsin, to form a governing channel of trade, available at all seasons for northwest Illinois, Wisconsin and Iowa.

4th. By a connection from Alexandria with the North Missouri Railroad, and thus through St. Louis with the Mississippi valley Railroad to the Gulf of Mexico, to *always* (winter and summer) have for that portion of the great valley, *a route as available north and south, as on the many east and west routes now being constructed by eastern enterprise and ambition.*

Looking at the first division of the road (from rapid to rapid) as simply an improvement of the Mississippi river, it may be contended that the improvements to be ultimately made by the general government for the navigation of the rapids may dispense with the necessity for the Railroad. But who can tell when these improvements will be made. Eastern enterprise and capital have been freely used to control the trade above the rapids, and draw it by the *Lakes*, and *Railroad*, and *Canals*, to the eastern Atlantic shores; and this influence will, more and more be felt in the Halls of Congress. But it is undoubtedly the interest of the lower Mississippi river, and especially of St. Louis, not only to improve for steamboats the navigation of the Mississippi river, but also by Railroads, so as to give outlet *all the year*, for what the river only affords accommodation for during a *part of the year*. On this last fact is founded, to a great extent, the enterprise for roads east and west, above the rapids. They must succeed, but, if the west is true to itself, only by such development of the country as will give abundant business in all directions. If St. Louis, and

the lower Mississippi valley trust *solely* to the river, necessarily shut up by the ice of winter, for a part of the year, for the business of the upper valley—then must a much larger proportion of it pass eastward than would be the case if an equally convenient outlet was furnished southward at all seasons.

Along the upper Mississippi valley a very large proportion of the trade has been to St. Louis. Now they see other outlets are shortly (not yet) to be opened, in some respects more convenient *because always available*. They look to St. Louis still; and, desirous to preserve that connection, liberally subscribe for the construction of a railroad towards that city; but they look, also for *some aid from St. Louis*.

Looking at the Warsaw and Rockford Railroad in its connections, shown in 2 to 4 of the objects embraced in the construction, it needs no argument to show its importance to St. Louis and the lower Mississippi valley. An inspection of the map of route and connections of the road, suggests more reasons for its prompt construction than can be stated in this brief view.

The Warsaw and Rockford Railroad Company now stand in this position: They have a liberal charter, giving them all legislative facilities for the construction of a railroad from Warsaw to Nauvoo, and thence to any point of intersection with the Chicago and Galena Railroad. A local influence was created (by the difficulties of navigation over the Lower Rapids), for a railroad from Warsaw to Nauvoo, and considerable stock subscribed. But it was subsequently believed and advised that the 1st Division of the Road should embrace both rapids. This led to the survey and reconnoisance in March last, and subsequently to the instrumental survey, just completed. It was understood that St. Louis would take a reasonable interest in the work, and it was estimated that if the following basis for construction could be obtained, the work could speedily be completed, viz:

Now subscribed or provided for	$113,000
Additional subscription in Warsaw and Nauvoo	10,000
Pontoosuc	30,000
Dallas	10,000
Line of Road	50,000
St. Louis	200,000
Henderson county and Oquawka	100,000
Mercer county, Keithsburg and Millersburg	100,000
Fort Madison	25,000
Rock Island city and county	125,000
Davenport, Port Byron, Galena, etc	50,000
	$813,000

On this the friends of the road in the upper country have exerted themselves, and have obtained subscriptions to the amount of $350,000

Henderson, Mercer, Rock Island Counties, &c., &c., to vote in November, the result not doubted, with encouragement from St. Louis..... 500,000

$650,000
Needed from St. Louis.....$200,000

It is now presented to your aid, with all others permanently connected with the commercial and real estate interest in St. Louis, to establish a fair basis for the prosecution of this work. It is not the desire of the Company to force this work to construction, against all the difficulties of the present money panic (not scarcity) in the market, but to so prepare themselves, by subscriptions, as to take advantage of the opportunities that may present themselves. They have resolved to make the subscriptions only payable at the rate of 30 per cent. per annum, and not even at this rate unless the way can be clearly seen to the successful prosecution of the work. The people in the upper valley look to St. Louis for aid, and unless that appears in some material form, it may be that the county votes necessary to secure a proper basis may be lost, and the interests and energies of the people there thrown to advance the Eastern connections, *in which direction they can always secure aid of word and deed.*

Your attention is particularly called to the Charters and Engineers' Reports published in July, 1853.

H. D. BACON,
D. A. JANUARY,
W. C. WAGLEY,
T. S. O'SULLIVAN, } *Committee.*

Pacific Railroad.

We are gratified to learn that the vexed question of location west of Jefferson City, has been finally settled by the Board of Directors. We copy the proceedings of the Directors touching this subject from the St. Louis Intelligencer.

St. Louis, November 14, 1853.

At a meeting of the Board of Directors of the Pacific Railroad Company, held this day, the following among other proceedings, were had:

A committee appointed at a previous meeting of the Board to examine into the validity, &c., of certain subscriptions made to the Pacific Railroad, submitted the following report, which was accepted, viz:

The undersigned committee, appointed "to examine into the character and validity of certain subscriptions made by certain counties, say, Moniteau, Pettis, Johnson, Morgan, Benton, Henry and Jackson, ask leave to report that they have performed that duty, and that they find the following persons fully authorized by the several County Courts to make additional subscriptions on the part of said counties, to the capital stock of the Pacific Railroad, to wit:

For Jackson county,	Wayman Crow,	amount,		$75,000
" Moniteau "	D. Rollins,	"		25,000
" Johnson "	B. W. Grover,	"		50,000
" Morgan "	G. R. Smith,	"		25,000
" Henry "	do.	"		50,000
" Pettis "	do.	"		70,000
Making on the part of said counties,.....				$295,000

Unconditional subscriptions———

In the following named counties we find the subscriptions on the part of individuals, amounting to

Moniteau county,	181	shares	.....	$13,100
Cooper "	420	"	.....	42,000
Morgan "	100	"	.....	10,000
Johnson "	248	"	.....	24,800
Lafayette "	255	"	.....	25,500
Benton "	18	"	.....	1,800
Making in private subscriptions.....				$117,200
Amounting in aggregate.....				$422,200

In regard to the private subscriptions above set forth, we are most positively assured by Messrs. Grover, Holden, Smith and Rollins, representing said counties, that the signatures are genuine, and that the parties are all able and willing to pay their respective subscriptions whenever the company may think proper to call for the same. The committee, considering the question of the "free right of way" in the Johnson county route as part of the duty contemplated by the resolution above quoted, have examined the bonds of various counties, and individuals guarantying the same, and find for

Cole county	the bond of	Messrs. Price and Cordell.
Moniteau "	"	A. R. Nelson and others.
Cooper "	"	Eli Stone do.
Pettis "	"	G. R. Smith do.
Johnson "	"	County Court.
Morgan "	"	late Howard and others.
Lafayette "	"	Isaac H. Wood do.
Jackson "	"	G. R. Smith do.

The original subscription lists, County Court orders, and right of way bonds, are in the possession of the proper officer of the Pa-

cific Railroad Company, and can be referred to, if your Board shall desire other information than contained in this report. All which is respectfully submitted.

(Signed) JOHN C. RUST, HY. S. PATTERSON, } Committee.

To Thos. Allen, Esq., Prest. P. R. R. C.

St. Louis, November 14th, 1853.

The following preamble and resolution was then unanimously adopted:

WHEREAS, The counties contiguous to and along the line of the inland route of the Pacific Railroad, and the citizens of said counties, have in good faith, as we believe, secured to the Company the free right of way, and additional subscription of four hundred thousand dollars, as required by the eleventh section of the act of the Legislature, approved December 25th, 1852. It is, therefore,

Resolved, That said Pacific Railroad, west of Jefferson City, be and the same is hereby located along the inland route, through Johnson county, to such termination in Jackson county, as shall be hereafter fixed by the Company, in accordance with the provisions of the Eleventh section of the act above recited.

Hickman and Obion Railroad.

South-western Kentucky and South-eastern Missouri, districts so long shunned by emigrants and neglected by capitalists, have recently become the theater of active and energetic measures in relation to public improvements. The men of these districts have had the sagacity to perceive and appreciate the fact that the natural point of connection between the railroad systems of the south-eastern and north-western States is below the mouth of the Ohio river, and they have shown a wise forecast in seizing upon the proper time to commence their operations.

Perhaps no other people ever had it in their power to develop their resources in as great a degree at so little cost. It is not necessary that they should build great trunk lines to connect them with distant parts of the Union. Let them ascertain and establish a point on the Mississippi where the two great systems can be conveniently connected, and they will encounter little difficulty in procuring the means to construct the short stems required to unite them with the great lines east and west of the Mississippi. By

establishing the practicability of a direct line, at a reasonable cost, from a point opposite Hickman, Ky., to the Iron Mountain, Mo., they will bring the influence and capital of those interested in the great lines leading to Mobile, to Savannah and to Charleston, to aid in constructing the work west of the Mississippi; for it is obvious that the profits of all those works will be greatly augmented by a connection with the Mississippi valley railroad. It is not our purpose to indicate the point of connection on the Mississippi: we leave that to those more immediately interested and better acquainted with the country. The people of Hickman have acted with commendable energy; and possessing a good situation for a commercial city, bid fair to draw the lines of improvement east of the river to that point. We learn from the "Argus" that seven miles of the Hickman and Obion railroad have already been put under contract to be completed by the First of December, 1854. Nor do they seem to confine their views to their own side of the Mississippi: the following preamble and resolutions adopted at a meeting of the citizens of Fulton county, on the 7th of November, 1852, show the enlarged and liberal views by which they are governed.

Whereas, The time is near at hand when a connection will be formed by railroad between St. Louis, Mo., and the Mississippi river below the mouth of the Ohio, and

Whereas, A railroad convention of the adjoining States is to be held at Benton, Mo., on the 14th inst., to devise ways and means to accomplish that object and designate the terminus for the same on the Mississippi river, and whereas in the opinion of this meeting, Hickman, Ky., presents under the circumstances the most favorable point for the same.

Resolved, That Fulton county and the town of Hickman will cordially co-operate with our Missouri friends in designating the point for said terminus, and aid liberally in the construction of the road.

Resolved, That by tapping the Mississippi at Hickman, the chain of railroad connection between the great Northwest and the South and Southeast would be complete—that there it meets the Nashville and Northwestern Railroad in a direct line for Nashville, Tenn., Charleston, S. C., and Savannah, Ga., also the States of Virginia and North Carolina; also the Mobile and Ohio Road with all their connections south and east—thus opening up to the mineral and agricultural interests of Missouri, a market without a parallel in extent and value.

Resolved, That the route from Hickman to Benton or its vicinity has been found to be entirely practicable for a railroad,

presenting no obstacles which are formidable; the Mississippi bottom being already levied and protected from inundation.

Twenty-eight delegates were appointed by t he meeting to attend the convention at Benton.

St. Louis and New Orleans Railroad via New Madrid.

We find in the *Journal of the Times*, published at New Madrid, Mo., a well digested article entitled "St. Louis and New Orleans," in which the author proposes a railroad connection between these cities by a line crossing the Mississippi at New Madrid. The writer says:

„In regard to this extensive road, this important fact should not be forgotten, that a large portion of it is already in contemplation, but with a desire to connect other points. This proposition is only an extension of a preconceived plan of roads. This proposed extension increases the chances of each division of the road, and strengthens the entire scheme.

The New Orleans and Jackson Road is now under contract. The road from Jackson to Memphis is regarded as a certainty. The St. Louis and Iron Mountain road is under contract in part —all located. The only link in the whole chain from N. Orleans to St. Louis, missing, is from the Iron Mountain to Memphis— distance about 160 miles.

The proposition and the facts are presented to the public. It may not be the best or most feasible plan which might be projected for connecting these points, but it is certainly the one some will regard as the best, most feasible, and more propitious of consummation.

It is of no ordinary importance to this line that the point proposed for a crossing is superior in every particular to any other on the river, from Cairo to New Orleans. The Madrid Bend banks are high on each side of the river, with no impediment from high water—the country on either side being entirely free from inundation—from swamps, or anything that could be regarded as an obstruction—*ad infinitum*. The climate is mild; no obstruction from ice has ever occurred here, nor has steamboat navigation ever been interrupted at this point by ice, low water, or otherwise. Another advantage of crossing at Madrid is, the connection the line in question will have with the Nashville Road."

We regard a railroad connection between St. Louis and New Madrid as being of sufficient importance to authorize the building

of a branch from that place to some point on the Iron Mountain road, whether such branch should ever become a link in the line of travel to New Orleans or not. But it is doubtless true that an extension of the line to Memphis would enhance the value of the Iron Mountain branch, and, until a more direct route can be obtained to New Orleans, would be of great advantage to St. Louis.

It should be borne in mind that the improvements of the age demand an approximation to air lines, and we trust that the enterprising citizens of New Madrid and Hickman will give this fact its due consideration before they determine on a route in the direction of St. Louis.

Lake Erie, Wabash and St. Louis Railroad.

Few of our readers, we believe, are aware of the steps which have been taken in the prosecution of this important enterprise; and fewer still, perhaps, have contemplated the peculiar office which this road is calculated to perform, by connecting the Lake Erie and Canadian systems of navigation, railroads, and commerce with the great central system of the Mississippi valley at St. Louis. The following extracts from an "Exhibit of the Lake Erie, Wabash and St. Louis Railroads" cannot be otherwise than interesting to all our readers.

[From the American Railway Times.]

The valley of the Maumee River, from the mouth on Lake Erie to Fort Wayne, and that of the Wabash River, thence to its south bend near Lafayette, form in their course a direct track, as far as the last named point, between Toledo and St. Louis. The work herein presented under the name of "The Lake Erie, Wabash and St. Louis Railroad," is a constituent part of line from Toledo to St. Louis, and represents the Indiana portion of that line, in length, 168.54 miles. The following remarks, unless otherwise expressed, refer to the road in Indiana. The Ohio portion from Toledo to the State line of Indiana, 75 miles in length, under the title of the "Toledo and Illinois Railroad," will be prosecuted at the same time and by the same parties, (though necessarily under different organization,) for which due arrangements have been made, by a perpetual lease of the Ohio road to the Indiana Company. These combined lines will introduce us into an existing chain of roads now nearly completed, through Illinois to Alton and St. Louis, and

command, also, the other outlets of the Mississippi as high as Burlington.

CHARTER.—The company derives its charter under the general Act of the Legislature of Indiana, of May 11, 1852. "To provide for the incorporation of Railroad Companies." Its organization was completed by the election of officers on the 1st day of September, 1852. A through survey of the line has been made, under the direction of William Durbin, Esq., an experienced Civil Engineer, the results of which are very satisfactory. Traversing one of the most extended and productive valleys in the West, whose staples for many years have swelled the markets of New Orleans and more recently (since the Wabash Canal was completed) those of Toledo and Buffalo, following the lines of commerce, starting from the most Western extreme of Lake Erie, and approaching the city of St. Louis, this work began very soon to attract public attention in the Atlantic States. For the cities of Boston and New York especially, the Wabash Valley has ever been regarded the natural route to St. Louis. It would have been sooner occupied with a railroad track, but that the jealousy of Ohio and Indiana for their canals denied to companies a charter, until a more enlarged policy under their new constitutions, opened the way to private enterprise by the general Railroad Laws of each of those States, lately passed.

SUBSCRIPTIONS.—Subscriptions to the capital stock of the Lake Erie, Wabash and St. Louis Railroad have been made to the amount of two millions of dollars. Of this, $700,000 were taken in Indiana, and $1,300,000 in New York.—Among the shareholders are names prominently connected with our oldest and most successfull railroad enterprises, and well known in that relation, both in Europe and America.—An instalment of ten per cent. has been paid, and further requisitions will be made monthly, as it is intended the work shall advance with the utmost rapidity.

CONSTRUCTION.—A contract has been made with Messrs. Boody, Ross & Co., of New York, to build, furnish and equip the entire line of road by the first day of May, 1855. The contract covers the road bed, and its superstructure of wood and iron, with the necessary side tracks, station houses, machine shops, and other buildings and fixtures, including a suitable and speciefied outfit of rolling stock, all to be finished and furnished as a first class road. The contractors, being men of great experience, having built with great success other important roads, (among them and most recent, the "Rochester, Lockport and Niagara Falls," and the "New Jersey Central") the company have the most reliable assurance that their work will be well executed and with signal dispatch.

COST OF THE ROAD.—The contract cost of the road with its furniture and equipment, will be a near approximation of four milli-

ons of dollars. As this covers everything but right of way and depot grounds, with some small amount of contingencies, the entire cost of the road in motion, with a suitable outfit of rolling stock, may be set down (including interest during construction,) at $4,500,000. The work has been apportioned to sub-contractors, some of whom are at work, six corps of engineers being engaged in repairing the line. — Releases of right of way are being taken, which in Indiana are generally voluntarily, or will cost but an inconsiderable amount.

LOCAL BUSINESS.—No better illustration of the probable productiveness of this stock or of the business of the road can be given, than its position on the map, indicating its connection with the Western system of land and water carriage.—A brief explanation, however, of some of its local and domestic resources, will be appropriate. Pursuing a middle latitude, it passes through a region where wheat and corn equally abound, and reaches at its western end the country of pasturage. More cattle have passed the Wabash River at Attica, (where the road leaves the river,) than at any other point. The Maumee and Upper Wabash sections are forest lands, covered with a steady growth of burr and white oak, black walnut, poplars, wild cherry, curled maple, &c. At Lafayette, the road enters the eastern margin of the prairie world, which stretching west to the Rocky Mountains, requires its supply of timber from behind. This timber will go westward to the Mississipi, for house building, fencing, cabinet work, cooperage, and other mechanical uses. — The lumber traffic is now a profitable one on every Ohio and Indiana road, and none more so, than those approaching the prairies. The market for lumber west of Lafayette, is boundless, and this article alone would furnish a daily train of cars. Saw-mills are arising every five miles on our newly finished roads. * * * *

COMMANDS BOTH SIDES OF LAKE ERIE.—A road from St. Louis along the continuous valleys of the Wabash and Maumee, commands what no other St. Louis road can do, both sides of Lake Erie, and connects itself thus, with almost equal directness, with both the Canadian and American systems east of Toledo. Public opinion has already settled in favor of this as one of the cardinal routes, and as uniting not only large cities, great waters, and entire systems in our own country, but as part of a continental work connecting two nations, and adding to an internal water commerce already very extensive, the increased facilities of a land commerce by steam, at the very moment when our neighbors are endeavoring to make that connection available from the Detroit river to the mouth of the St. Lawrence.

COMMERCIAL RECORD.

In connection with the general view of commerce and finance contained in the leading article of this number, we commence the publication of a "COMMERCIAL RECORD," wnich we design to continue in each succeeding number, provided our labors in this department should receive the approbation of our patrons.

In making up the "Commercial Record," we shall always aim to collect our facts from the most authentic sources, selecting only such as we may deem useful and worthy of being preserved for future reference.

We cannot expect to do full justice to this department in the beginning; but trust that when our arrangements for procuring facts shall have been completed, a few months of observation and practice will enable us to give method and form to the "Commercial Record," that will make it acceptable and useful to individuals engaged in every branch of business.

—

November 15, 1853.

Owing to the low stage of water in the Mississippi and its tributaries, and the high prices of freights, from the month of August to the present date, the receipts of produce at St. Louis, though comparing favorably with the same period in 1852, have been much less than dealers were authorized to expect from the abundant crops produced in all parts of the country tributary to this market.

The effects resulting from the difficulties of river navigation during the current season cannot all be foreseen at present: but, as collections in the interior depend in a good degree upon the sales of produce, one of the consequences will be a scarcity of money for mercantile purposes until the opening of navigation in the spring.

On the 5th instant freights from St. Louis to New Orleans were quoted as follows: flour $1.20, pork $1.75, per barrel; and other descriptions of produce from 65 to 75 cents per 100 lbs. Such extreme prices were calculated to suspend transactions in produce, and could not be long maintained. Since then a rapid decline has taken place, and we now quote the following as the current rates: flour 50 cents; pork 87½ cents; whisky $1.00 per barrel; corn 40 cents per sack; other descriptions of produce from 35 to 40 cents per 100 lbs.; cattle $8.00, and hogs $1.50 per head.

The crop of cereals, with slight exceptions, is abundant throughout the valley States; and though fluctuating, prices have been highly favorable to the producers.

WHEAT.—Sales reported to-day ranging from $1.06 to $1.20 per bushel. At New York, prices (reported by telegraph) of Western $1.75; Genesee $1.80; Southern $1.65; Pennsylvania $1.85;—export demand large. The quantity of wheat delivered at tide water by the New York canals, from the opening of navigation to 7th inst. inclusive, amounts to 6,767,178 bushels against 5,471,495 for the same period in 1852.—Increase 1,295,683 bus.

FLOUR.—The receipts of this year will exceed those of 1852 by perhaps 50,000 barrels. Sales to-day of superfine and extra brands at from $5.75 to $6.18 per barrel At New York (same date,) sales are reported for State at from $7.00 to $7.06; Ohio $7.12 to $7.25; Southern $7.25 to $7.33; and at New Orleans, on 12th inst., the price of superfine flour was reported at $7.00 per barrel. The quantity delivered at tide water by the New York canals up to 7th instant, is 2,421,472 barrels against 2,859,346 barrels in 1852—decrease 437,874 barrels.

CORN.—Sales at from 38 to 45 cents, as in quality, sacks included. Sales at New York of this date: mixed 80½ cents, yellow 82 cents. From appearances the receipts of this year will fall below those of 1852.

The receipts of flour, wheat, corn and barley at tide water from the New York canals, for the first week in November, in 1853 and 1852 have been as follows:

	Flour, bbls.	Wheat, bu.	Corn, bu.	Barley, bu.
1853.....	96,143	308,609	58,711	132,587
1852	143,812	288,212	66,176	306,914
	Dec. 47,699	Inc. 20,397	Dec. 7,465	Dec. 32,291

The aggregates of the receipts of the above articles so far for the years 1853 and 1852, have been:

	Flour, bbls.	Wheat, bu.	Corn, bu.	Barley, bu.
1853...	2,421,472	6,767,178	2,812,698	1,938,527
1852...	2,859,346	5,471,495	5,031,948	1,508,855
	Dec. 437,874	Inc. 1,295,683	Dec. 2,221,250	Inc. 429,772

The receipts at tide water of the principal articles of produce, from the opening of the Canals to and including the 7th instant, have been as follows:

	1851.	1852.	1853.
Canal open	April 15.	April 20.	April 20.
Flour.....bbls.....	2,885,292	2,859,346	2,421,472
Wheat.....bush.....	2,680,150	5,471,495	6,767,178
Corn.... ..bush.....	7,293,843	5,031,943	2,312,698
Barley ....bush.....	1,215,183	1,508,855	1,938,527
Oats.....bush.....	.....	.....	3,305,239
Beef .....bbls.....	41,716	37,674	39,080
Pork .....bbls.....	45,024	69,379	105,000
Butter.....lbs.....	5,487,200	3,659,600	2,936,900

Lard.....lbs.....9,270,800	9,869,400	11,305,900
Bacon.....lbs.....10,822,100	9,656,100	19,909,400
Cheese.....lbs.....18,128,600	11,753,000	5,606,300
Wool.....lbs.....10,337,200	7,531,200	6,098,400

The receipts last year from November 7 to the close of navigation, which extended into the month of December, of flour, wheat, corn and barley, were as follows:

Flour.....bbls..... 604,772	Corn.....bush.....379,695
Wheat.....bush.....1,283,451	Barley....bush.....771,630

If we reduce the flour to wheat, allowing five bushels to the barrel, it will be seen, that the quantity of wheat delivered at tide water, in 1853, is 893,690 bushels less than during the same period in 1852. This added to the 2,221,250 bushels, decrease in the quantity of corn makes the aggregate delivery of these two articles less by 3,114,940 bushels than during the same period of last year.

When we take into view the high prices of these commodities in New York, and the facilities of transportation from the lake region and from the States east of the Alleghanies, a strong presumption arises that the spring and summer supplies of breadstuffs for the eastern cities and for exportation must be drawn chiefly from the valley States, and that prices will continue to rule high throughout the season, even if friendly relations should be restored between Turkey and Russia at an early day.

Tobacco.—The receipts for the present year are estimated at 9,907 hogsheads and 8,832 boxes. The crop of 1853 is not expected to exceed that of last year.

Hemp.—It is believed that but little of the old crop is left in the hands of the producers. The amount received during the year is estimated at 61,522 bales against 53,331 bales in 1852. Prices have been highly remunerating to the growers. Sales of three small lots reported to-day at $120, $122 and $127 per tun.

Lead.—The quantity received up to the present time is reported at 397,410 pigs against 416,985 in last year. The imports of the year will probably exceed the amount received in 1852 by a few thousand pigs. Prices have ruled high during the season. Sales of 1137 pigs Galena reported to-day at $6.40—a silght decline from former prices.

The *Galena Jeffersonian*, of the 10th inst., contains the folfowing interesting statistics of the products of lead in that region, furnished by Capt. Edward Bebee, of Galena, Illinois.

Years.	No. Pigs.	Price.
1841	452,814	not known.
1842	447,909	$2 24
1843	559,261	2 34
1844	627,672	2 80
1845	778,498	2 96.

Years.	No. Pigs.	Price.
1846	732,403	2 89
1847	772,656	3 17
1848	681,969	3 24
1849	628,934	3 67
1850	568,589	4 20
1851	474,115	4 08
1852	408,628	4 12

It will be seen that the total production of lead in the past 12 years has been 7,140,248 pigs; or *four hundred and forty-nine millions, eight hundred and seventeen thousand, three hundred and sixty pounds!* At an average price of three dollars twenty-four cents and sixty-three one hundredths ₩ lb, or a total of $14,602,410. Of this lead, nine-tenths has been shipped from Galena.

The effect of the California emigration upon the quantity of lead produced, is seen clearly in the table above. In 1848, when the fever was raging most violently, the falling off is most visible. The decrease has been rapid until the present year, though the lead actually dug has all the while had the benefit of a rising market. The flood of emigration is turning this way again; and we hope, at the close of navigation, to be able to say that the product of this year exceeds that of 1852 by 50,000 to 100,000 pigs. Enough is now known to warrant us in asserting that the increase will be considerable, though the precise figures cannot be set down.

Hogs.—The hog crop of the Western States is believed to be more abundant than for several years past. Packing has not yet commenced at this point; and prices remain unsettled. We learn that $4.00 per 100 lbs. has been offered. At Cincinnati, on the 11th inst., the market was reported dull, with small sales of extra hogs at 4¾ cents per lb. The sale of the hog crop will compensate, in some degree, for the large quantity of cereals, which must be withheld from market during winter.

Salt—.The quantity received at St. Louis during the present year has fallen below that of 1852. We quote Turks Island at $1.50 per sack, and Kenhawa at 50 cents per bushel.

Sugar.—The receipts during the current year have been large. Arrivals of the new crop, up to the present date, have been small. Prices are quoted at 4 to 4¼ cents for fair, and 4⅜ to 4½ for good.

Molasses.—Prime plantation selling from store at 25½ to 26 cents.

The stringency which has characterized the money market for several months still continues. Dealers in negotiable paper secured by Deed in trust on real estate readily obtain from 12 to 15 per cent. per annum. But the rates of exchange would seem to indicate that money in the hands of the bankers was in quantity sufficient for all legitimate business transactions. Exchange on

the eastern cities has stood at ½ per cent premium during the season, and on New Orleans and Cincinnati at par. Bank issues of other States (denominated currency) constitute almost the entire volume of circulation in Missouri.

The following table exhibits the rate of discount at which the bank notes of other States are purchased by the brokers of St. Louis:

Alabama	3	p. c. disc.	Maryland,		N. Carolina	3	p. c. disc.
Connecticut	1	"	Baltimore	1 p.c.d.	Ohio	1	"
Delaware	1	"	count. b.	2 "	Pennsylvania		
Georgia	3 to 4	"	Massach.	1 "	Philadelphia	1	"
Illinois	1	"	Maine	1 "	country b.	1 to 5	"
Indiana	1	"	Michigan	3 "	RhodeIsland	1	"
Kentucky	1	"	N.Hamp.	1 "	S. Carolina	3	"
Louisiana	1	"	N.Jersey	1 "	Tennessee	2½ to 3	"
Vermont	1	"	Virginia	1 "	Wisconsin*	1	"
			NewYork	1 "			

* Fire and Marine Insurance Company 3 per cent. discount.

The banking system of Illinois seems, thus far, to have worked well; and the registered notes of Illinois banks are generally prefered by the people to the small notes of eastern banks. Notwithstanding the late failure of the Massillon bank was calculated to excite a greater degree of caution on the part of the community, confidence appears to remain unshaken in the solvency of western banks in general. The New York banks are gradually strenghtening their specie basis, and their deposits are on the increase; while at the same time they are slightly contracting their circulation and loans. It will be seen from the following statement, that the increase of specie in the two weeks, ending on the 12th instant, was nearly $2,000,000.

Weekly Statement of the New York Banks.

	Loans.	Specie.	Circulation.	Deposits.
Oct. 29, '53,	$83,400,321	$10,866,672	$9,300,350	$53,335,462
Nov. 5, '53,	83,092,630	11,771,880	9,492,158	55,500,977
Nov. 12, '53,	82,802,409	12,823,575	9,287,629	56,201,007

It is to be regarded as a remarkable feature in the commerce of the country, that a severe stringency should occur in the money market at a period when the precious metals were rapidly accumulating.

The following statement from the *Washington Union*, which we find to be correct so far as we have compared it with public documents, shows the accumulations of the precious metals from the year 1847 up to October 31, 1853 inclusive.

Deposites of California Gold at the Mints.

Philadelphia Mint.

In 1848.....	$44,177 00
1849.....	5,481,439 00
1850.....	31,667,505 00

1851	46,939,367 00
1852	49,321,490 00
1853 (to July 30th)	38,080,253 85
Total	$172,034,231 85

Branch Mints.

	Dahlonega.	Charlotte.	New Orleans.	Total.
1848	———	———	$1,124 00	$1,124 00
1849	———	———	669,921 00	669,921 00
1850	$30,025 00	———	4,575,567 00	4,605,592 00
1851	214,072 00	$15,111 00	8,769,628 00	8,998,865 00
1852	324,931 07	28,361 76	3,777,784 00	4,131,076 83
1853, (to J'y 30,	260,607 78	15,399 49	1,389,208 02	1,674,215 29
Total	839,635 85	58,872 25	19,183,286 02	20,080,794 12

Add deposites at Philadelphia mint	172,034,231 85
Total California deposites to July 30, 1853	192,115,025 97

Subsequent Deposites at Philadelphia Mint.

August, 1853	4,469,000 00
September, 1853	2,975,000 00
October, 1853	4,327,000 00
Total California deposites to Oct. 31, 1853	203,886,025 97

We have thus the amount of gold of California production received at the mints up to the 1st of November, except the deposits of the last three months at the branch mints, which are not likely to have been of sufficient magnitude to make them material to our purpose. The next thing to be considered is the amount of specie exported from the United States, and this we are enabled to exhibit with sufficient accuracy. Official documents show that the entire exports and imports of specie, from 1847 (the famine year) to 1853, were as follows:

	Imports.	Exports.
1847	$24,121,289	$1,907,739
1848	6,360,224	15,841,620
1849	6,651,240	5,401,648
1850	4,628,792	7,522,994
1851	5,453,592	29,472,752
1852	5,503,544	42,674,135
Total	52,718,681	102,823,888
		52,718,681

Excess of exports over imports of specie for six years	50,105,207
Add exports for the first ten months of 1853, as ascertained from returns and estimates, say.....	25,000,000
Total export of specie.....	75,105,207

The whole question may then be briefly stated as follows:

Receipts of California gold to Oct. 31, 1853....	$203,886,025 97
Exports of specie from 1847 to Oct. 31, 1863...	75,105,207 00
Net increase of specie.....	128,780,818 97

That a considerable portion of this money has been drawn from the ordinary channels of commerce for the purpose of building railroads is doubtless true; but it has been infinitely better employed in this way than if all had gone to swell the volume of foreign commerce. In this, the country has acted wisely: and having received a wholesome admonition from the stringent state of the money market, we conclude that the prospect of rapid and progressive development of our national wealth was never brighter than now.

The high prices of iron, and other useful metals, have given a new impetus to their production; and causes are operating in this and other countries which authorize the hope, that the production of iron in the United States is about to be established upon a more solid and permanent basis. The following article from an English paper contains facts and suggestions highly interesting to all who desire the growth of the iron trade in this country. We copy from *The United States Mining Journal.*

The Iron Trade of Great Britain.—Its Present Condition and Prospects.

The firmness of the iron market, notwithstanding the increased value of money, and the unsettled state of our continental relations, is naturally engaging attention. It appears that production is, at least, stationary, if not reduced, that the stock of iron is diminished; and that the demand has greatly increased.

It is worthy of enquiry, whether this anomalous position of the iron trade is merely temporary, or is likely to be maintained. The present position of the iron trade is anomalous; inasmuch as in all former periods of prosperity, it was pretty evident that, however large the existing demand, the supply would soon overtake that demand; and, in all probability, so far exceed it as to create a fresh period of depression, which could be relieved only by a still greater demand.

Any one who has watched the progress of manufactures in Great Britain during the last thirty years, and has observed the prodigious increase in the demand for iron,—from half a million tons annually to two millions and a half,—must have been struck with the remarkable coincidences which have enabled the supply to meet the demand. Had it not been for the discovery of the carbonaceous iron ores in Scotland, and the introduction of hot-blast in smelting iron, the production in Great Britain would not have exceeded one-half of the present amount; and the recent discovery of the oolite iron ores in the midland counties of England appears singularly opportune for maintaining a supply of minerals adequate to the still increasing demand.

It is true, there is a temporary deficiency in the supply of coal; but no one who is conversant with the subject can doubt that the opening of new coal fields would, ere long, obviate that difficulty. Materials for iron making are found in this country in sufficient quantity to meet any conceivable demand that can arise.

A novel impediment has, however, unexpectedly presented itself; and it is an obstacle by no means easy to be overcome. For the first time in our acquaintance with British manufactures, a scarcity of labor threatens seriously to interfere with the progress of production. This scarcity will, in a great measure, be counterbalanced in several of our staple manufactures—such as the woollen, silk and cotton—by improved machinery and the more extensive employment of women and children; but these resources are not available in the manufacture of iron. The manual labor of strong men is, and will be, the chief instrument in that manufacture. Mining may be assisted by machinery; but it must be mainly dependent on the sinews of robust men; and it can never be carried on by women or children. Emigration has already taken away hundreds of miners, and thousands who might have become miners, if they had remained in England: and emigration will take away hundreds and thousands more.

Under these circumstances, the probability is that, while the demand for British iron will continue to increase, the production will, for some time to come, remain nearly stationary, if it does not actually recede. The difficulty of procuring miners, and other workmen required in the manufacture of iron, will be an obstacle to the erection of new iron-works, however profitable the speculation may appear; and the same circumstance will interfere with the extension of iron-works now in operation, particularly those in the hands of prudent and calculating proprietors, who wisely consider that, by attempting to extend their works in spite of the scarcity of labor, they may so enhance the rate of wages as to lessen the aggregate amount of their profits.

If these views are correct, either the export of iron or the consumption at home, or both, must shortly receive a considerable

check. The general prosperity in this country has undoubtedly given an impetus to the home consumption of iron, which is probably at least ten per cent greater now than it was two years ago. We have no means of accurately ascertaining the home consumption; but knowing the quantity of the iron made, and the quantity exported, we can very nearly approximate to the quantity required at home. The make of pig-iron in the years 1851 and 1852, may be put at 2,600,000 tons annually; and the present make does not materially vary. The exports in those two years were equivalent to rather more than half that quantity; so that, after making allowance for improvement in trade at home, it may be fairly estimated that 1,400,000 tons pig-iron is now required for home consumption. The exports of iron having so increased in the present year as to leave little more than half the required quantity for home consumption next year, supposing the make and the export of iron both to remain at the present rate, is a fact which must soon press itself upon the attention af makers, consumers and merchants. Judging from the past, and taking into account the extraordinary stimulus given by recent circumstances to foreign trade, the exports should be much larger in 1854 than in 1853. The quantity of iron exported in 1850 was equivalent to 1,100,000 tons of pig-iron; in 1851, 1,300,000 tons; and in 1852, 1,450,000 tons. In the first eight months of this year, the export is equivalent to 1,245,000 tons of pig-iron, which is at the rate of 1,870,000 per annum. This quantity, deducted from a total make of 2,600,000 tons per annum, would leave only 730,000 tons for home consumption, which is about half the estimated quantity required.

The following statement exhibits a detailed account of the exports of iron from the 1st of January to 31st or August in the present year:—

		Declared value.	Equiv. in pig-iron.
Pig-iron	Tons 228,305	———	Tons 228,305
Bar, bolt and rod	474,144	———	632,192
Wire	6,395	———	9,592
Cast	38,589	———	40,510
Wrought, sundry sorts	119,600	———	159,466
Steel	12,976	———	25,952
Tin-plates	———	£826,334	45,000
Steam-engines	———	305,857	20,000
Machinery	———	826,057	40,000
Hardware and cutlery	———	2,300,990	45,000
Making			Tons 1,246,025
Add 50 per cent. for four months, Sept. 1 to Dec. 31,			623,012
Total			1,869,037

LITERARY DEPARTMENT.

Some Thoughts on Self Intellectual Culture.

BY A MEMBER OF THE KEOKUK (IOWA) BAR.

Continued from page 60.

And here, permit me to make one or two observations, concerning reading. The object is, the acquisition of knowledge. And knowledge does not consist simply in the recollection of facts and incidents and dates, but in the comprehension of principles, in the understanding of the various relations of things, their nature, constitution and analysis. Their essential properties, modes of subsistence, peculiar affinities, and natural conditions and vicissitudes ought to be investigated, comprehended and mastered. We ought clearly to understand what we read, appreciate the author's reasoning, exercise fearlessly and independently our best faculties in forming opinions and embracing conclusions; and when we reach results, we ought to incorporate them with, and make them a part of, the very constitution of our mind. Nothing short of this, will be productive of permanent usefulness, or establish independent, high-toned, vigorous habits of thought; nothing short of this, will confer ornament upon character, or dignity upon human nature; nothing short of this, will produce and nurture that stern independence of soul, that fixedness, solidity and energy of moral principle, and that plain, practical transparent philosophy so intimately connected with all the duties and pleasures of life, and which exercise so majestic and sweeping an influence in the daily walks of life.

He who adopts the opinions of others upon simple trust and confidence, surrenders recreantly the best gift and the highest jewel of God's bounty to the eternal spirit. He who yields his judgment implicitly to the conservation of another, is unworthy the name or the privileges of a Freeman. And I unhesitatingly affirm that no man can with fidelity discharge the duties he owes his God and his country unless his cherished opinions are the deliberate acts and fruits of his own best judgment.

And who, permit me to ask, dares to attack this birthright of a free citizen? Who dares to take into his own keeping the intellectual freedom and the immortal interests of another? He who would thus rob us of our dearest rights: rights whose title-papers bear the seal of high Heaven, and assume responsibities periling his eternal welfare, is a traitor to his country, an enemy of his race, and an apostate from his God. Let it constitute the pride and glory of the American, to assert the independence and pre-eminence of his judgment, to adopt sentiments and conclusions with due discrimination, to base his action upon an intelligent appreci-

ation of his position and his duties, and to vindicate his moral and intellectual freedom everywhere, and at all times. Let him not in a spirit of arrogance and pride rashly reject what he cannot comprehend, or treat with levity or contempt the opinions of others, but let him study with diligence, examine with patience, preserve an impartial mind, and rely upon it, the conclusions he may thus reach will be formed of sterling material, and prove of infinite value. They will wear well amidst the vicissitudes of life, and acquire brightness and polish from attrition. They will elevate and enrich and adorn character, and resting upon the foundations of justice, their influences will be recognized and felt far beyond the period of our present existence.

I have alluded thus earnestly to the subject of independent thought, because it is not to be concealed that there is a spirit abroad in our country hostile to its manly exercise and full development. Individuals are frequently charged with arrogance for an independent expression of opinion. There are those in our midst who seem to imagine they possess a chartered power and an incontrovertible right to think and act for, and dictate to their fellow-men. This *individual* disposition is continually illustrated in our daily social and business intercourse, and its *associate* development and transcendent dominion in our political and ecclesiastical organizations. This mighty influence, when thus exercised, is wrong, radically wrong! It is war upon our liberties, treason to our nature, and we must resist it. And to accomplish this successfully, to understand intelligently our relations, and maintain our freedom, moral and religious, civil and intellectual, we must cultivate our minds, enlarge the sphere of thought, and faithfully use all the powers which Heaven has bestowed upon us.

Another most vital and efficient means within our power of promoting mental culture, of acting upon the public mind, and impressing its influences upon all, is in the delivery of public lectures. This is comparatively a modern element in the intellectual revolution, now in progress throughout the civilized world, and more especially in our own country. This means of instruction, until very recently, was principally confined to the academy, the cloister and the university, which were supposed to be the favorite retreats of genius and learning. Knowledge was so enshrowded in scholastic phrase, and so elaborated with metaphysical disquisition as to conceal its beauties, paralyze its energies, and destroy its utility. Few persons were admitted to minister at its altars or to pay their devotions within its temples. The ground was consecrated to a privileged order; and the great mass of the people, the fresh, vigorous, elastic mind of the adventurous and enterprizing were excluded most studiously from its presence and all participation in its ennobling influences. But as the human mind awakened to a sense of its rights, and became conscious

of its energies and its true position and dignity, this infamous system of exclusion was broken down, and the lights of knowledge began to illume the face of society. The barriers that separated the wise and learned from the ignorant and uncultivated, were prostrated we trust forever, and the genial influences of knowledge extended to all. Mere pretensions to Literature became subordinate to solid acquirement, the senseless jargon of the schools could not withstand public scrutiny, and the abstractions of an airy metaphysician yielded to the profounder reasonings of an enlightened philosophy. Knowledge is now presented in her natural grace and beauty, disrobed of her unmeaning decorations; captivating and delighting her votaries with her elegant simplicity, and scattering her imperial gifts so that all who will may enjoy them.

Lectures have now become a popular and efficient medium for the communication of solid and useful information, and have aided and are now aiding essentially in promoting the cause and multiplying the influences of public instruction. The lecturer possesses an important advantage over the mere writer. He can amplify more in his arguments, illustrate his principles by experiments, employ a more diffuse and ornate style, and give to fancy a stronger wing and a loftier flight. And if to these, he superadds the gift of eloquence, his empire is unbounded. He can lead his audience captive to his will, explore with them the depths of science and the sweetest flowers of poetry, point out the exquisite performances of art, ascend amid

> "The planets, suns and adamantine spheres
> That wheel unshaken through the void immense."

And while he improves the understanding and feasts the imagination, he can direct the enraptured mind to the imperishable attributes and immortal destinies of the soul.

I would, therefore, most earnestly urge the great importance of lectures as a useful, convenient and economical mode of arresting public attention, awakening the slumbering energies of mind, communicating general and accurate views and principles of the arts and sciences, directing youth in the pursuit after knowledge, and creating a thirst for more extensive and profound erudition.

A larger portion of the lectures which are delivered, are not only distinguished for their extraordinary ability and learning, but for the force of thought and eloquence which they bring to bear upon the cause of individual and social advancement. Many of them are indeed perfect gems of literature, cherished jewels in the crown of genius, concentrations of all that is vast and profound in philosophical investigation, or grand and impressive in intellectual character. Here, science pursues her arduous journey, and tells the story of her sublime discovery; here, elegant literature contributes her fairest flowers, and pictures her loveliest productions; and here, imagination shadows forth her grandest conceptions, and gives form to her most beautiful creations.

Genius, too, that strange mysterious power, that spark of celestial fire, careering onward amid the infinity of space, now mounting up amid the sun and stars that gem the heavens, and now contemplating the beauty and grandeur of earth, now winding her way amid the deep recesses and solemn retirements of the soul, and anon soaring aloft amid cloud and storm and tempest, riding on the whirlwind, flashing in the lightning, she, too, brings her noble offering to this common altar, to enrich, to purify and to enlighten. Examine these lectures. Where can you open upon richer veins of thoughts and eloquence! Where can you find nobler essays on humanity, higher reaches of intellect, purer strains of morality, profounder researches in philosophy, and more extended views of government? Nowhere in the whole range of written thought. They stand forth, peculiar and powerful instruments, in advancing civilization, and in establishing the glorious triumphs of mind, reason and religion.

It is believed that many young men of fine talents and generous disposition are, by this means, lured from the haunts of dissipation, and for the first time, impressed with a consciousness of their own duty to society, and of their capacity for self-improvement and distinguished usefulness. The diamond is not the less valuable because it lies buried in the midst of rude materials, nor is the human mind less susceptible of every great and good impression because it remains plunged in the veriest depths of ignorance and vice. Truly has the poet said:

> "Full many a gem of purest ray serene,
> The dark unfathom'd caves of ocean bear;
> Full many a flower is born to blush unseen,
> And waste its sweetness on the desert air."

And, perhaps, the impassioned speaker, whose lips are touched with the fires of eloquence, may communicate a kindred spark to some rustic mind, whose faculties have slumbered, and might have slumbered on forever, and kindle a flame there, that will burn and expand; and though the frosts of neglect may chill, and the winds of adversity may blow, yet it will continue to acquire volume and intensity until neighborhoods and states and empires shall feel its genial warmth and bow beneath its consuming power.

And to you of my readers, whom education and fortune have blessed with superior gifts above your fellow-men, I would say you are under solemn responsibilities to lend your influence and talents in promoting this important enterprize in the cause of human progress. I speak not lightly when I say, your education and intellectual treasures constitute a sacred trust to be faithfully executed, and you cannot, without a violation of duty, withhold your acquirements from the use of the public. Your talents are not your own; there are obligations, springing out of their possession, that compel you to render unto your fellow-beings all the good within your power.

And exists there an educated citizen who would not cheerfully contribute to the public happiness and prosperity, and who would not rejoice to strike the finest chords of the soul, and fill them with the riches and harmonies of learning? Is there one who would not experience a holy, ravishing transport of joy to transfuse a high and sublime thought into the mind of another, which would grow up in greatness there, acquiring new powers, invested with new properties, grappling with new combinations, and which in its novel and regenerated state would be transmitted through future generations as the richest legacy of the human intellect?

How grand the thought of Newton when the apple's fall led to the explanation of one of nature's mysteries! How expanded the conception of Columbus, when he saw in prophetic vision, a world vast in its extent and mighty in its elements, as yet untrodden by civilized man! How profound the idea and transcendent the joy of Franklin in drawing the lightning from the bosom of the distant cloud and guiding its course in its rapid flight! How lofty the conception and how illustrious the triumph of Fulton, when the effect of steam upon the business of life, and the mighty influences it must exercise upon the destinies of man burst upon his transported soul, and revealed themselves in all their prospective glory and majesty! Oh! there are thoughts in our midst, thoughts overflowing with precious interests to our race; thoughts pregnant with immortal fires which might light up nations to happiness and peace; thoughts which, if transplanted to some genial soil, would take root and flourish and expand and ripen into harvests of untold and endless value. And it is by the free interchange of mind, by the reciprocal transfusion of thought, and by the sovereign, searching influences of great principles of human action and conduct, that these important ends are to be accomplished. Let us then earnestly lend our assistance in enlightening the public mind, and strengthening its moral tone so that a consciousness of duty performed may be ours to shed a ray of light upon the evening of our lives. We know not how many youths may thus be educated to read and think, and hereafter become intelligent and useful citizens, through the influence of such humble yet honorable efforts. We know not how many anxieties of a father may be relieved, how many prayers of a mother answered, how many hopes of a sister realized. We know not what joy and sunshine may illuminate the social hearth, what great and lasting good may result to our country, even from such occasional gatherings to aid the cause of learning and morals and civilization amid the broad prairies and majestic forests of our own great West.

Another very important means of improvement within the reach of every neighborhood is the establishment of debating societies. In a country like our own, where the honors and emoluments of public life are open to all, and where every citizen is liable to be

called upon to participate in the political deliberations of the Republic, the importance of public speaking is obvious. This can only be successfully acquired in youth, and by long and persevering exercise; and we know not, how many of the young men who grow up in indolence and obscurity, might by early culture and diligent study, have become distinguished ornaments of society. Debating societies elicit the various powers of the mind, and test their strength and capacity. It is in the collision of intellect, in the generous pride and emulation of controversy, that we sometimes first become conscious of our sleeping energies, and draw successfully upon their great resources. It was in this humble yet glorious field of conflict, that many of the master spirits and giant intellects of the age, whose philosophy enlightens and whose eloquence electrifies, first fought their battles and measured their strength, and won their laurels; and it is in this same field, that many a struggle will take place, and many a victory be hereafter achieved by those, who will in after days, become the strength of their country's defence, and the jewels of their country's greatness.

These societies exercise an excellent influence in leading the young mind to habits of attentive reading and reflection. If a youth is desirous of communicating his ideas to others, he must first master those ideas, and make them his own. He is compelled to think deeply and comprehend clearly in order to encounter successfully the arguments and address of his antagonist. He knows that his weak points will be assailed, and perhaps his strongest fortresses either openly attacked or covertly undermined unless he is thoroughly guarded and ceaselessly vigilant. This is one of the most useful results flowing from these associations. They inspire confidence, lead to careful investigation, and establish mental and moral independence. And the accomplishment of these ends are worthy the highest efforts of our race. They elevate man to that rank in the scale of creation, comporting with his nature and destiny, and which God throughout all time designed him to occupy. It ought to be remembered in conducting these societies, that their object and true purpose, are to interchange our views, to mutually instruct each other, and to invigorate and discipline the faculties of the mind, and not to engender a spirit of mere controversy, or cherish a foolish love of argumentation. The cardinal objects are the ascertainment of truth, the acquirement of habits of some logical reasoning, and clearness, order and fluency in the expression of thought, as well as a chaste and graceful style of delivery.

If these societies are properly regulated, and conducted in a spirit of generous emulation, they will be productive of vast and extensive good; but, if, on the contrary, they are used as instruments to gratify personal pique, or to display personal arrogance, or to encourage the exhibition of the ingenuity of sophistical reasonings, they will result in permanent injury to both mental and moral improvement.

The fifth and last means to which I shall allude as connected with our intellectual progress, is the cultivation of habits of observation. These possess a peculiar and striking value, as the works of nature und the productions of art are everywhere around us, and continually before our eyes. The great and miscellaneous volume of God's workmanship belongs to us all, to be read and studied and admired. The creations of genius, elaborate and magnificent, belong to the world, and the "possessor's narrow claim" cannot prevent the man of taste and sensibitity from enjoying their beauties and feasting upon their wonders. Machinery, too, with its Briarean arms, its mathematical exactitude and stupendous energies, working, producing, never tiring, presents an object of exceeding wonder and astonishment. All these, in the philosophy they teach, in the genius they exhibit, in the exquisite beauty and finish they manifest, in the glowing imagery they embody, in the sublime emotions they excite, and in the elevating and refined pleasures their contemplation yields, belong to us, to the world, to future generations. Every individual, I care not what may be his situation in life, or amid what scenery he may have been cradled, has forever before him objects worthy of his most serious observation, and overflowing with profound instruction. He cannot turn his thoughts within himself without being filled with wonder and awe; he cannot allow them to wander abroad without admiring the grandeur and glory and diversity of God's works. An individual of observing habits must necessarily be intelligent. Observation implies reflection, mental exercise, intelligent thought, and these constitute the original elements of all true greatness. We ought, then, to acquire these habits of observation in our youth, and cultivate them assiduously throughout life, for they will prove a source of unmixed delight and happiness. New pleasures will continually spring up and adorn our path, new and pleasing trains of thought be ever suggesting themselves, and new and grateful scenes be ever present to the imagination; and the earth, the air, the ocean, and the heavens will administer to the improvement of our minds, the refinement of our taste, and the exaltation of our affections. The theme is one so delightful and interesting, so linked with loved associations and cherished reminiscences, that I would be pleased to dwell upon it, to unfold its beauties, to demonstrate its dignity and usefulness, and to bathe the imagination in its untold glories. But we have not the time to do so.

[To be continued.]

Valley of the Ohio.

ITS CONQUEST AND SETTLEMENT BY AMERICANS.

BY MANN BUTLER, ESQ.,
Author of the "History of the Commonwealth of Kentucky."

Continued from page 60, vol. XI. No. 67.

LORD DUNMORE'S WAR IN 1774. BATTLE OF KENHAWA, OR POINT PLEASANT, UNDER GENERAL ANDREW LEWIS. INDIAN CHIEFS RED HAWK, SCOPPATHUS, ELLINIPISCO AND LOGAN.

Some took refuge in the forts which had been built; whilst others collected in houses, which were easily converted into temporary fortresses. Fort Redstone, (the present Brownsville in Pennsylvania,) on the creek of that name, and Fort Pitt, were the principal asylums for the people of the exposed frontier.

To avert this impending storm of barbarian warfare, a formidable expedition into the enemy's country was now determined on, by the government of Virginia. This was to consist of two bodies of troops, one to be commanded by Governor Dunmore, and the other to be commanded by Col. Andrew Lewis. The plan of operations agreed upon, was that the Colonels Charles and Andrew Lewis should raise a body of troops among the hardy, fearless and skillful riflemen of the western part of Virginia and North Carolina, who, down to our own times, have continued to form the most formidable arm of the western country of the United States. Gov. Dunmore was to march a body of men from the northern and eastern counties. These two wings were to unite at the mouth of the great Kenhawa, then, by treaty with the Cherokees, the western boundary of the province of Virginia. About the 1st of September, 1774, the western wing of the expedition assembled at Camp Union, (now the town of Lewisburg in Virginia.) While the troops for the main expedition were thus collecting, and arrangements were made on a considerable scale for this campaign of the royal governor, it was thought advisable to despatch another expedition of inferior strength, and consequently susceptible of more rapid movement, into the Indian country. It might distract the combinations of the enemy, and divert his inroads from the frontiers. For these purposes, Col. Angus McDonald raised a body of 800 men, who, early in June, 1774, assembled at Wheeling. The party succeeded in penetrating to the banks of the Muskingum; but without doing the enemy any material damage, beyond and burning their slight and frail villages. So insignificant was the impression made on the Indians, by this expedition, that as our men returned, the savages followed their footsteps spreading barbarities wherever the precautions of the inhabitants had not disappointed their vengeance.

The western wing of the expedition was divided into two regiments, of four hundred men each; one commanded by Col. Charles Lewis, of Augusta, Virginia; the other by Col. William Fleming, of Bottetourt county; the chief command was confided to Col. or rather Gen. Andrew Lewis, the same who had been honored by Washington as Major in his first regiment, in 1755. There was likewise a company of volunteers commanded by Col. John Field, of Culpepper county, another from Bedford, under Capt. Buford; and two companies from the Holston country, then in dispute between the colonies of North Carolina and Virginia.

One of these was commanded by Evan Shelby, the father of Isaac Shelby, the future governor of Kentucky, who served as a subaltern in his father's company. The latter three companies composed part of a regiment under the command of Col. Christian, who was hurrying to join the main body. This, now, amounted to eleven hundred men, and commenced its perilous march to the point of junction, which had been fixed by Lord Dunmore, at the mouth of the Big Kenhawa. A march through a mountainous wilderness of 160 miles, which after a lapse of nearly eighty years, still remains to a great extent, was an enterprise of no little peril and difficulty. It was to be prosecuted through a country peculiarly favorable to Indian ambuscade, and against the most warlike force of the north-western tribes of Indians, a part of whom had, but 19 years before, almost annihilated a British army, furnished with all the apparatus of war. This was the first considerable enterprise against these Indians since the defeat of Braddock; except the march of Col. Bouquet to the Muskingum; that officer, however, brought the Indians to submission, without any actual engagement. Such auspices would have been dismaying to any men, but the brave and experienced backwoodsmen of the western country. They had seen the tactics of Europe fail before the sons of the forest, when their own military notions, imbibed from local and personal experience, would most probably have preserved the royal army with its general from a murderous defeat. Trusting to their own native resources of skill and courage, they transported their provisions on pack-horses, all, that an obstructed wilderness would permit. After 19 days' march, the army, under the guidance of Capt. Mathew Arbuckle, succeeded in reaching the Ohio river, where the Great Kenhawa enters into that stream. There, at the point between the two rivers, since known as Point Pleasant, an encampment was formed for the accommodation of the troops, until the eastern wing, under the command of the governor of Virginia, should arrive. Runners were immediately despatched up the Ohio to obtain intelligence of his Lordship.

In the meantime, information was received from him, that he had changed the whole plan of operations, upon the faith of which the mountaineers of Virginia and North Carolina had risked their lives through a wilderness of unequalled difficulties. Notwith-

standing this pledge of military co-operation, which ought for the most obvious reasons of safety and honor to have been held sacred, Lord Dunmore had determined to march across the Indian country to the Shawnee towns on the Scioto; of this he informed Lewis, and ordered him to join there.

It is difficult to determine, whether folly or perfidy prevailed most in so unprecedented a departure from his own plan of co-operation, as exhibited by this new and dangerous scheme of the royal governor. The danger to which he exposed each wing of the army, of being successively cut off by the enemy, in its separate march, into the Indian country, would point to the former solution of this extraordinary military disappointment; while the madness of proposing a concentration of his forces—not *before* they entered the enemy's country, but in the very heart of it, where the army must have conquered all antagonists before it would have been allowed to make such an advance as this—would seem more probably to implicate the fidelity of the governor to the colonists. It may, however, be too wanton suspicion, to accuse the royal governor of an intention to sacrifice his left wing; yet his conduct was as dangerous to that body of his forces, as if it had proceeded from the most deliberate treachery. Circumstances in the subsequent course of this nobleman's official conduct, almost justify these suspicions of his motives; they were, indeed, entertained by the legislature of Virginia.*

On the 9th of October, 1774, the discouraging intelligence of altered plans was received by Gen. Lewis from Lord Dunmore, through some Indian traders.† The next day, the devoted band, thus treacherously abandoned by their commander-in-chief, still taking counsel from their own brave hearts, determined to penetrate deeper into the Indian wilderness. It was not so easily done, as it was readily adopted.

Early in the morning of the 10th of October, 1774, two soldiers proceeded up the Ohio bank, for the purpose of killing game; they had got about two miles from camp, when they suddenly discovered a large body of Indians rising from their encampment. The enemy, on seeing the two white hunters, fired and killed one of them; the other escaped to warn his fellow soldiers of the impending danger. To his commander, he communicated the fact that "he had seen a body of the enemy covering five acres of ground, as closely as they could stand."‡ Gen. Lewis immediately ord-

* Wirts Henry, 148, 256.

† Simon Kenton says: *he* had been so employed; but reached Point Pleasant before Lewis, and concealed his despatch in a hollow tree. While loitering about, he was fired upon by some Indians, who dispersed his party, and he made his way back to Louder's Fort, on the west fork of the Monongahela. McDonald's Sketches, p. 208.

‡ Proceedings of the Historical Society of Virginia; they contain an interesting account of this important action, by an actor in this perilous scene. Vol. I. 45.

ered out a detachment of the Bottetourt troops, under Col. Fleming, and another from those of Augusta, led by Col. Charles Lewis; while the general remained in camp with the reserve. Our troops marched up the Ohio bank in two lines and met the Indians in the same order, about four hundred yards from the Virginia camp. The battle began about sunrise with a heavy fire from the enemy, which drove the Virginians back; but being reinforced by Col. Field, the Indians now retreated, forming a line behind logs and trees from river to river. Thus our countrymen were completely hemmed in, between the Ohio and the Kenhawa. In this desperate position, with no chance of retreat, and but little of outflanking the foe, the battle raged with a ferocity and destruction unparalleled by any other encounter, between our countrymen and the aborigines.

At the outset of the engagement Col. Charles Lewis was killed, and Col. Fleming was wounded; Col. Field fell, the next victim of high rank. To these must be added five captains, three lieutenants and several other subalterns, amounting with the privates to seventy-five killed and 140 wounded; almost every fifth man in the detachment was either killed or wounded. With this prodigious execution by the Indians, fully retaliated by our own riflemen, scarcely at all inferior to the enemy, in any of their wily arts, the hostile lines alternately advanced and receded, covering both sides of the intervening trees with bullets and blood.

In this fearful and obstinate contest, Gen. Lewis apprehensive of protracting the battle till night, ordered Capts. Evan Shelby, George Matthews and John Stuart to proceed with their companies, into the rear of the enemy, and then turn upon them.* This most fortunate monoeuver was effected by marching up the Kenhawa, as high as Crooked Creek, one of its branches, under the concealment of the high banks and the growth with which they were covered. So soon as the detachment reached its destined position, and began to fire on the enemy, they, fearing, as is supposed, that the reinforcement under Col. Christian, which was known to be on its march, had arrived, began to retreat, about sun down, precipitately over the Ohio, to their towns.

This memorable battle, which has for its importance in western history, been too little known, was fought with the flower of the north-western tribes, in the meridian of their strength, and commanded by some of their most distinguished chiefs.

Among these was Cornstalk, a chief of the Shawnees; he had the principal command assisted by other gallant spirits of the Red men, but whom our ignorance and the early contempt of our people mixed with no little hatred, for their barbarian enemies, preclude from any notice beyond their names. They were Red Hawk, a

* Geo. Shelby's information to Col. Chas. T. Todd confirms the account in Border Warfare, 127.

Delaware chief; Scoppathus, a Mingo; Ellinipisco, a Shawnee, and son of Cornstalk; Chiyawee, a Wyandot; and Logan, a Cayuga.* The distinguished leader of these forest forces is said to have opposed the war; and wanted to go with a flag of truce, on the eve of the battle; but he was overruled by the resentments or the heroism of his people. When the battle had been determined on, the energies of this chief, like a true patriot, were all exerted for the honor, if not the benefit of his countrymen. He was frequently recognized encouraging his men, whenever they slackened in their efforts, by calling out to them in his native tongue: "Be strong, be strong." When an Indian faltered in the performance of his duty, Cornstalk instantly cleaved his head with his tomahawk, as a warning to his followers of his discipline and fierce determination.

A few hours after the battle, Col. Christian arrived with a reinforcement of three hundred men; much to the relief of this gallant and hard tried body.

On examining the battle field, 21 Indians were found lying dead, 12 others discovered behind logs and other concealments, besides many that were observed to be thrown into the river, during the battle. It was one, indeed, which deserves a high place in the history of the ruthless contest between the white and the red races, for the lovely and luxuriant land of the west—the interior world of North America—this new paradise of plenty and liberty for the children of the axe and the plough. No instance is known in our annals of so fair and pitched a battle between the two races: unassisted, on the one hand, by the peculiar military arts of Europe, and on the other, by the ambuscades which constitute the fortresses of the forest. Neither party was unequally armed, no artillery; it was an unmixed trial of native arts and familiar arms, in which a brave and skillful use of the rifle mainly decided the battle, with the exception of the happy diversion up the Kenhawa. This battle may well be pronounced a pure contest of hard fighting which covered the riflemen of the west with honors as durable as the mighty section of the republic, which it so essentially contributed to conquer from the savages. In this encounter were completed, if not formed, some of the most efficient commanders in the west; it proved a most invaluable military school for our population. The roll of officers in the battle of Kenhawa, or Point Pleasant, embraces the names of most of those who, in after times, signalized themselves in the great contest for the valley of the Ohio and its waters. The Campbells, both William and John, Isaac Shelby, George Mathews, afterwards a governor of Virginia, John Steele, William McKee, Charles Cameron, Bazalel Wells, Daniel Boone, and James Harrod, were actually engaged. Cols.

* Border Warfare, 129.

Christian and Floyd, of future fame, tried their utmost to get up in time for the battle.*

After throwing up an entrenchment, at the junction of the two streams, which had been the seat of the late battle, for the protection of the wounded, Gen. Lewis, more true to his duty than his commander in chief, proceeded still deeper into the fastnesses of the enemy, and marched his troops on the route to join Lord Dunmore, at the head of the right wing of what should have been the combined army of Virginia. This advance into the stronghold of the enemy, affords the most decisive proof of the victory of the Virginians.

Dunmore appointed, to meet the Indians at Camp Charlotte, upon Sippo creek, about eight miles from the Scioto. The negociation is said to have been conducted, on the part of the Indians, by Cornstalk, the hero of Kenhawa.

This chief, at the first council of his tribe, after the bloody battle of Point Pleasant, is said to have called upon his brother chiefs, to declare what was to be done, when the whites were pressing upon them in two bodies? No one was prepared to give an answer to the soul-stirring interrogatory. Cornstalk then proposed that the squaws and papooses† should all be put to death, and then that the warriors should march against the enemy and be killed too. Still no one would join in the appalling debate; then said the energetic chief, striking his tomahawk in the council post: "I will go and make peace."

† The Indian name for women and children.

In the council, which was attended by the governor and the Indian chiefs, the former reproached them with their various infractions of peace and good neighborhood. Cornstalk recriminated with singular spirit and dignity. On this occasion, the eloquent chief is said, by a witness who had listened to the favorite orator of Virginia, and her first governor, the great Henry, to have drawn a lively and afflicting picture of the ancient prosperity and power of his race, contrasted with their present diminished strength and unhappy condition. He expatiated on the cheating of the Indian traders; and to avoid these evils, he proposed that no white man should be allowed to trade with the Indians for his private profit; that his white brethren should send their goods by the hands of honest men, who should sell them at fair prices. Above all, this patriotic and enlightened chief, half a century before our modern temperance reform, implored the governor, that no *fire-water* should be brought among them.

The governor finally arranged the preliminaries of a treaty with the Indians; the purpose of which has been represented by two

* The official account of this battle was written by Isaac Shelby, at the order of his commander, on a drum head; he had entered the battle as a subaltern, and came out a captain. This despatch may be found in Niles' Register, about 1816, communicated by Col. Chas. S. Todd.

writers in the western country of most ample opportunities of original information,* as a truce, and surrender of prisoners with hostages, as a preparatory to a definitive treaty, to be held the next summer, at Fort Pitt. Another writer† says, that peace was made with the Shawnees, on condition, "that the lands *on this side* of the Ohio should be delivered up, and that four hostages should be immediately given for the faithful performance of these conditions." The term, *this side* of the Ohio, could hardly be the language of a treaty made on the northern bank of that river, to describe lands on its southern shore. Nor do any evidences exist that are known to the writer, which determine the exact conditions of such a treaty, beyond a proclamation by Lord Dunmore, of peace with the Indians. In this instrument, dated January, 1775,‡ it is proclaimed, "that the Shawnees, from whose incursions the most dreadful effects were felt, to remove all ground of future quarrel, have agreed not to hunt on this side of the Ohio, and have solemnly promised not to molest any passengers on that river." This is far short of a cession of the southern side as asserted by Burke; though in yielding the right of hunting to the whites, the treaty yielded everything valuable to the Indians.

[To be continued.]

* Doctor Daddridge and Mr. Whithers, both of Virginia.

† Burke's History of Virginia, III, continued by Mr. Giradin to the close of the siege of York.

‡ Virginia Gazette of 1775, in Congressional Library.

The Dead Man's Race.

BY WM. GARDNER BLACKWOOD.

A moral this my tale combines—
A truth from bad example ta'en,
Which, to youth told at ev'ning time,
For like pursuits the eager wish
May antedate, and serve to warn.

THE PILGRIM: A TALE.

Over a wild and trackless moor,
Homeward-bound, an honest boor
Prick'd on his jaded steed;
The Sun was sinking down to rest
On th' bosom of the blushing West,
And o'er the earth dark shadows prest
Along with ghost-like speed.

NOTE.—This Poem appeared originally in the *Southern Literary Messenger*, some years ago, and copied from that journal has had various newspaper publications—in which it has undergone the usual emendations and typographical improvements. [!] In a corrected form the author has permitted its reprint in the JOURNAL & CIVILIAN.—*Ed.*

The bat went flapping round and round,
Dense gnat-clouds, with a murmurous sound,
  Hung in the stagnant air;
And in some stunted pine-tree hid,
Shrill cried the gauze-wing'd Katy-did,
To answering cricket's chirp, that chid
  The silence broken there.

And whip-poor-will, with plaint of woe,
Soared o'er the marsh, whose sedge below
  Frogs croak'd in sullen mood;
Whilst might be seen oft here and there
Some lonesome bird, that scanty fare
Found in the wither'd fern and bare
  Soil of the solitude.

Apace, veil'd Night, abroad the sky,
Shut e'en these objects from the eye,
  In pall that mock'd the sight;
Pale stars, that but a moment shone,
From out the firmament were gone,
And the Queen-Moon shed from her throne
  A wan and ghastly light.

The night was chill; scarce thro' the dark
Shimmer'd the fire-fly's fitful spark
  Above the grassless plain;
Anon, big drops of rain fell fast,
White vapors rose like genii vast,
And th' fingers of the winnowing blast
  Play'd with the steed's loose mane.

On press'd the boor—his craz'd mind fraught
With visions wild, by fancy wrought,
  Of fiend and spectre grim;
The goblin tales of boyish years,
By Memory whisper'd to his ears,
Roused in his heart its midnight fears
  Of some dread fate for him.

He saw cast wide in fitful change,
The mandrake's charnel fires strange—
  Jack-o'-the-lantern shone;
High on a crazy gibbet hung,
In heavy chains that clanking rung,
To and fro a skeleton swung
  With dull and mournful tone.

His fev'rish brain distemper'd grew;
Bright gleams, with cold yet fire-like hue,
  Their wizard phantasms spread;

And shapes to his affrighted eye,
From realm of Dream came wand'ring by,
In garbs that rustled horribly,
  Like crisp leaves o'er the dead.

Some tune half whistled—loud he sung;
His voice in clamorous echoes rung,
  It startled him the more;
He bent him to the howling blast
That told the tempest gathering fast,
And urged the steed, with rein loose clasp'd,
  E'en swifter than before.

A lightning flash!—the sheeny light
Gleam'd thro' the cloud-o'ershadow'd night
  With wildly vivid glare;
Asudden, saw the boor at hand,
With joy, a shelt'ring cottage stand,
And were dispell'd the phantom-band
  With inward mutter'd prayer.

From the wet saddle to the ground
He straightway leap'd with nervous bound,
  And smote the half-closed door:
No voice return'd; he push'd it back;
Revolv'd the hinge with jarring crack,
And a faint starbeam found a track
  Across the gloom-spread floor.

He entered there; an owl scared out
The crumbling wall, flapp'd round-about,
  With shrill *Tu-whit, Tu-whoo;*
A snake wound up the tottering roof,
A spider left its swinging woof,
And a foul toad, from these aloof,
  Close in a corner drew.

He groped about; just then her light
The Queen-Moon shed forth clear and bright
  Thro' cloud-rift parted wide;
A straggling ray, like spirit tall,
Glided within the cottage wall,
And, beaming, swept Night's curtain-pall
  With luminous arms aside.

Cold shrunk th' roots of his bristling hair,
Blanch'd his swart cheek, grew fix'd his stare—
  His heart-pulse ceased to beat;
With sweaty brow and curdled blood,
In formless horror mute, he stood,

As coffin'd, and in shroud, he view'd
A stark corpse at his feet.

Away!—away! those leaden eyes
Wear murder's seal: in vain he tries
To rend the demon spell;
A fiercer struggle: without heed
He totters where his steps may lead;
The door is gain'd—the frenzied steed,—
JESU, enshield him well!

Again the dreary heath he scours;
But now, 'neath mantle murk, Air-Pow'rs
About him seem to fly;
With eyeless skulls, before—behind,
Shapes strive his rushing limbs to bind
In fetters forg'd from the weird Wind
That menacing howl'd by.

The tempest in its threaten'd pow'r,
From black, beleag'ring clouds that lour,
Has woke to raging strife;
Broad sheets of lurid flame flash light
O'er the awe-striken face of Night,
And deep-voiced thunders lend their might,
Wild with electric life.

A blinding deluge surges fast,
Till the wide waste, like ocean vast,
Gleams with phosphoric glare;
Each blast-toss'd tree bends low its head
Beneath the Storm's impetuous tread,
And leaves and crackling branches dead,
Whirl thro' the fear-struck air.

His arms about his steed's neck flung,
Closer and closer the farmer clung,
As broke the thunder-peals;
Suddenly, smote his ears a sound
Like his call'd name: he look'd around,
And lo! came rumbling o'er the ground
A coffin set on wheels!

Upon the lid a demon lies,
With forky tongue and lidless eyes,
And tail in arrowy pride;
Blue lambent fires blaze on its brow,
Around it spreads a sulphurous glow,
And it nods like hearse-plume to and fro,
Some unseen Pow'r to guide.

Right onward sped the steed's wild race,
Right onward held the spectral chase,
  Over the gleaming waste;
Thro' red-seeth'd pools, with plashing sound,
The snorting courser's wing'd hoofs bound,
And they clatter o'er the turfy ground
  In hot and headlong haste.

Fled heav'n above, fled earth below,
Flash'd the white foam as on they go
  With whizzing sounds and din;
Like ghosts unhallow'd from the tomb,
Frore mists glide rustling thro' the gloom,
Chill winding-sheets for those whose doom
  No earthly goal may win.

The farmer wax'd still deadlier pale,
The laboring courser's strength gan fail,
  The Death-Fiend near'd his side;
It twitch'd his loosely flying rein,
Clutch'd at his steed's erected mane,
And struggled fiercely, nor in vain,
  To stay the ghastly ride.

A loud shriek from his pent up breast
Frighted the night-bird to her nest,—
  He fell upon the ground;
On the cold sod he senseless lay
Thro' that dread night: the coming day,
His helpless form was borne away,
  By friendly rustics found.

A burning fever on his brain,
  And reason's voice forever seal'd—
In fleeting intervals of pain,
  The farmer this strange tale reveal'd.
Some said, he at a neighb'ring Fair
  The eve of that dire night was seen;
That pledging gay companions there
  In madd'ning bowls he late had been;
And that the *Spirit*-Fiend had wrought
  The scenes with which his mind was fraught.
But even supposing that such was the case,
There were many believ'd in the DEAD MAN'S RACE.

SOUTHERN QUARTERLY REVIEW.

The October issue of this journal is before us. We have not space to notice its varied and valuable contents. The articles are of the usual ability and interest. There is no publication in the country which so favorably compares with the most popular of the transatlantic Reviews. Indeed, in the care and erudite research always evident in the preparation of its different contributions, the Southern Quarterly stands perhaps alone in conspicuous merit. South Carolina is preeminent in literary enterprise as in political distinction. The truth is—her prominent statesmen, jurists and scholars, are the exponents and ornaments of her literature. Elegant letters and public affairs divide equally the habits and occupations of her people. She was early a leader in the emulous promotion of literary progress. It was, if memory serves us, in 1827 that the "Southern Review," of which the Southern Quarterly is the worthy successor, was started in that State, under auspices soon giving it a reputation more brilliant than any like publication ever attained in this country. The masterly contributions of Legare—the recondite learning of Cooper—the philosophic disquisitions of Elliott, the elder—the antiquarian researches in literature and history of Nott—the elegant scholarship of Henry—and a score of others hardly less celebrated for splendid talents and all varied mental accomplishments, adorned and dignified its prolific pages. A *politico*-literary journal, however, with changes in the particular circumstances of the times in which it had origin, and the passing from the stage of public life of some of the distinguished actors, whose especial organ it was chiefly designed to be, it became for awhile extinct. But its revival in the present publication quickly followed, and with a support in the energy and ability of its conduct, establishing it in all its former popularity, and, as a purely literary work, upon a much surer and firmer basis. Its present prospects are still brighter than heretofore, and the whole South is now interested in its maintenance and general circulation. The array of its contributors embraces the best talent of the southern country. The names of Hammond, Thornwall, Holmes, Grayson, Bryan, Prescott, Miles, Simms, besides numerous others, are of classic celebrity in our national literature, and are the best guarantee of the character and value of the work. We commend it cordially to our readers in the West, and particularly to our fellow-citizens in Missouri. In the growing intercourse between the States west and those of the southern atlantic section, and the channels of future intimate connection that are daily opening, it is important to establish means for the commerce of ideas, and the intercommunication of views and opinions necessary to regulate and harmonize their mutual relations. Literary establishments must keep pace with commercial enterprise. While the one builds up internal prosperity, the other will foster social fellowship, and mould harmonious political sentiment and opinion.

ADVERTISING DEPARTMENT.

Western Journal and Civilian.

A FEW full sets, neatly bound old and new series, from January, 1848, during 5 years, 9 vols., for sale at $20 a set. Also full sets of new series, 4 vols. bound, $7 a set. Subscription price $3 a year, in advance. for 2 vols. New subscribers can thus obtain full sets of new series, six vols., 4 bound and 2 unbound for $10. Apply to I. J. COOPER, Agent, or to TARVER & COBB, Editor sand Proprietors, 73 Chesnut street.

Attorneys.

PHILIP PIPKIN, Jr. Attorney at Law, Hillsboro', Mo.

F. HEREFORD, Attorney at Law, Independence, Mo. Office over Thomas & Todd's store.

Refer to Messrs. Thomas & Todd, Smart & Hughes, Coleman & Dallam, Independence, Mo.; Hon. Wm. Scott, Hon. Thos. L. Price, George W. Hough, Jefferson City, Mo.; Tutt & Watson, M. Tarver, Esq., H. Cobb, Esq., St. Louis, Mo.

Notary Public.

ADOLPH KEHR,
Notary Public, No. 11, Fourth street, opposite the Court House.

ANTHONY V. HOFER,
Notary Public and Conveyancer.
Office: Southeast corner of Second & Walnut streets, next to C. Witter's Book Store, St. Louis, Mo.

Land Agency Notice.

WORTHINGTONG. SNETHEN continues to practice Law in the Supreme Court; to attend to cases before Congress; to prosecute Claims and settle accounts against the Departments and Boards of Commissioners; to procure Patents at home and abroad; to obtain Pensions and Bounty lands; to collect debts, dividends, legacies and inheritances in any part of the United States and in *foreign countries*; to make investments of funds in Loans and Stocks and on Bonds and Mortgage, and to negociate the purchase and sale of Loans, Land and Patent-rights in any State of the Union. Particular attention paid to California Land Title cases coming up to the U. S. Supreme Court on appeal.

☞ Communications *prepaid*, addressed to W. G. SNETHEN, 5, Carrol Place, Capitol Hill, Washington, D. C., will meet with prompt attention.

GENERAL AGENCY at Dubuque, Iowa, for public lands, real estate, military land warrants, payment of taxes, investigation of titles, amicable collection of debts, and all other business within the legitimate sphere of an Agent's duties, by

CHARLES CORKERY,
Notary Public and Commissioner of Deeds and Depositions for all the North-western States, Missouri included. 18\October, 1.

Brushes.

F. DINGS & CO., importers of German, French and English FancyGoods, and manufacturers of all kinds of brushes, No. 47 Main street, St. Louis, Mo.

Books & Stationery.

NORMAN'S, 14 Camp street, New Orleans, La. Books and Stationery, cheap Publications, Magazines &c., rich fancy Goods. Prices and qualities to meet your approval.

☞ Orders solicited. ☜

C. WITTER, 38 Walnut street, corner of 2d, St. Louis, Mo. German and French standard works, Novels and School Books. Blank Books, Writing Papers, Music Paper, Slates & Ink, Engravings, Prints, Steel Pens, Inkstands, &c. Printing and Binding executed in the best manner. Orders for England, France and Germany are executed at the shortest notice.

Book Printing.

THE ST. LOUIS UNION Book and Job Printing Establishment, No. 35 Locus street between Main and Second, St. Louis Mo.

CHARLES & HAMMOND, Book and Job Printers, Main street, St. Louis, Mo.

College.

JONATHAN JONES' COMMERCIAL COLLEGE, St. Louis, Mo., incorporated by the General Assembly, January 24, 1849. With full authority to "grant diplomas, award degrees, confer honors, and exercise all and singular, the privileges common to Commercial Colleges, authorized by law in other States."—Charter, Sec. 2.

Young Gentlemen wishing to prepare themselves for business pursuits, are respectfully invited to call during business hours and examine the mode of imparting instruction, the progress of the pupils, and the superior facilities extended to those desirous of qualifying themselves for the practical duties of the Counting House. Personal references given to above one hundred and eighty (180) Practical Accountants now in charge of Books in this city, all of whom have completed their business education in this institution.

N. B. For CIRCULARS containing information in regard to the terms, the course of instruction and all business connected with the above, call at the "Book-keeping Department," corner of Fourth and Chestnut streets, or address JONATHAN JONES, St. Louis, Mo.

Roofs.

C. M. & H. M. WARREN, manufacturers of Warren's Improved Fire and Water-Proof Composition Roofs, and Roofing Materials, which are kept constantly on hand and for sale (with directions for use) to those in the country who may desire to adopt this mode of roofing.

Office and Manufactory, east side Second street, between Almond and Poplar, St. Louis, Mo. Office hours from 10 to 11 o'clock, A. M., and 4 to 5 P. M.

Horse Shoeing.

JOHN MULLERY, Premium Horse Shoer in the alley, opposite the Post Office, will as usual pay particular attention to the various diseases affecting the feet of horses, and will guarantee to give general satisfaction in either of the above departments.

CHOCOLATE, COCOA & BROMA.

W. BAKER & Co's American and Vanilla Chocalate, Cocoa and Broma, to which first premiums have been awarded by the chief Institutes and Fairs of the Union, are for sale by all the principal Grocers in the United States, and by their agents,—

HUSSVY & MURREY, New York; GRANT & TWELLS, Philadelphia; THO'S V. BRUNDIGE, Baltimore; KENNET & DUDLEY, Cincinnati, Ohio. WALTER BAKER & CO.

Dorchester. Mass.

Liquors and Wines.

CHARLES DERBY, Wholesale Dealer in Foreign Liquors and Wines, Domestic Liquors, and that well known "Star" Brand of Rectified Whisky, No. 71 Levee, (entrance from Levee and Commercial Street,) St. Louis.

Safes.

M'MURRAY & DORMAN, Iron Railing Manufactory, n. s. of Chesn. bet. 9. & 10. streets, continue to manufacture at the above establishment, all kinds of plain and ornamental iron railing, balconies, bank and jail doors, book safes, fire-vaults, iron window shutters, iron awnings, lightning rods, bedsteads, gratings, and in fact, any thing which can be formed of iron.

Trunks.

M. PENDZINSKI, Premium Trunk Maker. Constantly on hand, at wholesale and retail, and made to order at the shortest notice, Hard Leather Trunks, Solid Leather Steel Spring Trunks, Valises, Carpet Bags, Packing Trunks, Ladies' Dress Boxes, &c.

Trunks repaired in the best manner. Call and examine for yourselves before buying elsewhere, as I am determined to sell as low as any house in the trade, at all risks, No. 42 North Second street [Westside,] between Chestnut and Pine streets, May, 1851.

Foundry.

ROLIN CLARK. PHILANDER BRALEY.
JOHN RENFREW. ALEXANDER CROSIER.

EAGLE FOUNDRY AND ENGINE SHOP. North-west corner of Main and Biddle streets. Manufacturers of all kinds of machinery, boilers and sheet iron work, portable circular saw mills always on hand, all orders executed with fidelity and despatch.

Records.

PERSONS wishing to obtain transcripts of records in New Madrid county, can procure them without delay by addressing the undersigned. And to avoid the inconvenience of remitting small sums, the records will be directed to George Pegrim & Co., St. Louis, who will deliver the same upon the payment of the fees. WM. MOSELEY,

Recorder of New Madrid Co., Mo.

March, 1851.

Boots & Shoes.

SCHRŒTER & EBY, Manufacturers of Boots and Shoes, No. 44 Main Street, Fourth door South of Pine,) St. Louis, Mo.

Saddlery.

T. GRIMSLEY & CO., Dealers in all kinds of Saddles, Bridles, Harness, Trunks, Carpet Bags, &c., No. 68 Main street, four doors below Olive st., St. Louis, Mo.

Jewelry, Watchmakery

& ENGRAVING.

P. STUBENRAUCH & SONS,

No. 11 N. 3d str. between Chesnut & Market, and No. 17, Chesnut street, opposite the New Post Office.

Would call the attention of the public and the trade generally to their extensive stock of Jewelry, Watches and Clocks. They also are well enabled by long practice and experience to perform all kinds of engraving, in stone as well as metal, in the best style, such as seals or Notary Publics, for Insurance Companies, for Railroad Cos., and all other Companies.

☞ All orders promptly executed and on the most liberal terms.

Commission Merchants.

B. MERRILL,

COMMISSION MERCHANT,

Tuscumbia, Ala.

Refer to M. Tarver, Esq., St. Louis, Mo.

ANGELRODT & BARTH. Commission and Forwarding Merchants, No. 126 North Second Street, between Vine Street and Washington Avenue, St. Louis, Mo.

RUSSELL & BENNETT. Wholesale Grocers and Commission Merchants, North-West corner of Olive and Second streets, opposite the Monroe House, St. Louis, Mo.

Flowers.

FLORA GARDEN.—This establishment contains a collection of Plants and Flowers not excelled, perhaps, by any in the United States. Of ROSES alone there are 230 varieties: and the proprietor has devoted ten years to storing his HOT-HOUSES, 420 feet long, with specimens of rare and beautiful plants, and flowers from almost every part of the globe The garden is pleasantly situated on South Seventh street and affords a delightful retreat from the noice and dust of the city. A commodious SALOON has been fitted up and will be supplied with Confectionary, Ice Creams, and other refreshments suitable to the season and the place. Spiritous liquors are excluded from the premises. Bouquets of the richest flowers and most tasteful combination furnished throughout every season of the year.

March 1853. G. ŒBEL.

Merchant Tailor.

J. H. BLOOD, Merchant Tailor, No. 21 Third Street, One door from the corner of Chestnut Street, St. Louis, Mo.

TO THE LADIES.

MR. P. A. PIGNERO begs to inform the public and the Ladies more particularly, that he has taken the store, corner of Pine & Fourth streets, under Planters' House, to which he will remove his establishment for False Hair, of every variety, and for matums, Combs, &c. &c. Mr. Pignero has recently received from the East a large and select lot of Wigs, ques, and False Hair, manufactured in every style and to suit every taste. He begs for an examination of his stock. Private rooms for ladies and gentlemen, entirely seperate, and fitted up, where consultation on diseases of the hair can be had free of harge.

JOHN LOUGHBOROUGH, Attorney and Counsellor at Law, office No. 56 Pine street, near Third, (adjoining that of the Clerk of the Supreme Court.

THE

WESTERN JOURNAL

AND

Civilian

M. TARVER & H. COBB, Editors and Proprietors.

VOL. XI.—O. S. 5, N. S. NOVEMBER, 1853. NO. 2.

TABLE OF CONTENTS.

ARTICLES.

ART. PAGE.

I.—THE INFLUENCE OF WAR AND PUBLIC IMPROVEMENTS ON PRICES. Stringent state of the money market. Observations upon the price of breadstuffs, and the effects of high rates of bread upon the price of cotton. Prices of flour and cotton at different periods. Review of the financial condition of the country. Conclusions, &c. By the SENIOR EDITOR..... 77

II.—AUBRY'S JOURNEY FROM CALIFORNIA TO NEW MEXICO. Description of the country. Battle with the Indians. Gold, &c..... 84

III.—GOLD AND SILVER PRODUCED BY THE MINES OF AMERICA FROM 1492 TO 1848. Quantity of gold and silver supplied to the European markets from all countries during three centuries ending in 1848..... 96

IV—ADDRESS OF URIEL WRIGHT BEFORE THE FIRST STATE AGRICULTURAL FAIR IN MISSOURI..... 106

JOURNAL OF INTERNAL IMPROVEMENT.

WARSAW AND ROCKFORD RAILROAD. Objects and prospects of the work. Amount of stock taken, and amount required to accomplish the enterprise. Address of a committee on behalf of the road to the citizens of St. Louis..... 114

PACIFIC RAILROAD OF MO. Location of the route west of Jefferson City. Amount subscribed by different counties, &c..... 117

HICKMAN AND OBION RAILROAD. Commencement of the work. Meeting and resolutions of the citizens of Fulton county, Kentucky..... 119

ST. LOUIS AND NEW ORLEANS RAILROAD VIA NEW MADRID 121

LAKE ERIE, WABASH AND ST. LOUIS RAILROAD. History of its charter. Amount of stock subscribed. Contract for construction. Cost of road. Local business. Connections with Canada and the railroad systems of the south-west..... 122

COMMERCIAL DEPARTMENT.

COMMERCIAL RECORD. — High prices of freight on the western waters. Crops in the valley States. Quantity of leading articles of produce received at St. Louis from the beginning of the year to the 15th Nov., 1853. Prices at date. Quantity of produce delivered at tide water from the New York canals, from 1841 to 7. Nov., 1853. Tabular statement of the quantity of lead produced in the region of Galena from 1841 to 1853 inclusive. Imports of sugar and salt at St. Louis in 1853. The hog crop. Rates of exchange. Rates of discount on the current bank notes of the different States. Weekly statement of the New York banks. Deposites of gold at the mint and branches from January, 1848, to July 30th, 1853. Imports, exports and production of the precious metals from 1847 to 31 Oct., 1853..... 125 to 131

THE IRON TRADE OF GREAT BRITAIN. Its present condition and prospects. Observations on the effects of emigration on the production of iron in Great Britain. Quantity of iron produced annually in Great Britain. Quantity consumed and quantity exported. Tabular statement of the quantity exported from 1st January to 31st August, 1853..... 131

LITERARY DEPARTMENT.

SOME THOUGHTS ON SELF INTELLECTUAL CULTURE. By a Member of the Keokuk (Iowa) Bar..... 134

VALLEY OF THE OHIO. Its conquest and settlement by Americans. Lord Dunmore's war in 1774. Battle of Kenhawa, or Point Pleasant, under Gen. Andrew Lewis. Indian chiefs Red Hawk, Scoppathus, Ellinipisco and Logan. By MANN BUTLER, Esq.,. 141

THE DEAD MAN'S RACE. By WM. GARDNER BLACKWOOD..... 147

SOUTHERN QUARTERLY REVIEW..... 152

Lithographic Establishment.

SCHAERFF & BRO., No. 71 Market street, St. Louis, Mo., are prepared to execute anything in the line of lithography; and especially, as they are in possession of the largest sized lithographic presses and stones, they are able to fill orders of the largest dimensions. They take and lithograph portraits and likenesses from daguerreotypes, engrave or lithograph show bill cards, business and visiting cards, diplomas, music, manifests, labels, facsimiles, bank notes, bank bills, bank checks, bill heads, drafts, bills of lading, maps, town plats, &c.

☞ They particularly beg leave to request the special notice of the public to their crayon drawings and colored lithographs, in as much as this is the only establishment in the West, where this improved style of lithographing is practiced

E. & C. ROEYN'S Lithographic, Drawing, Engraving, and Color Printing Establishment, No. 44 North Second street, below Pine, St. Louis, Mo.

Portraits, Landscapes, Animals taken from life, Music, Vignettes for Books, Drafts, &c. Show bills, Labels, Business & Visiting Cards, Architecture, Machinery, Drawings, Plans, Maps, &c. Drawings of all kinds executed on Stone.—Copper and Steel plates, wood cuts, Manuscripts &c. transferred. All kind of color and ornamental printing, executed in the neatest style, at moderate terms.

Paper Hangings.

THOMAS DALE,

Paper hanger, Whitener and Wall colorer. No. 168 Market street, near Alex. Leitch & Co's. Drug store, St. Louis, Mo.

☞ Job Plastering done at short notice and best style.

All orders for work promptly executed.

Manufacturers.

THOMAS GREY, Blacksmith and Iron Worker, No. 80 North Second street, between Olive and Locust, St. Louis, Mo., keeps constantly on hand and manufactures to order Ox Chains, Sledges, Wedges, and every description of Mining Tools, also Iron Hobbles and Picket Pins. ☞ Blacksmith work for Housebuilders, at the lowest prices. ☞ He has always on hand the highly recommended Iron Frame Bedstead, and Camp Stool.

Mathematical Instruments.

J. BLATTNER, Mathematical and Surgical Instrument maker, Dealer in Guns, Pistols and Sporting Materials, No. 66 North Second street, between Pine and Olive, St. Louis, Mo., manufactures, and has always on hand: Surveyor's Compasses, Levelling Instruments, Theodolite Pocket Compasses, Q. V. glasses, Barometers, Thermometers, Drawing Instruments, Spectacles, Ivory and Gunter's Scales and Protractors, Hour and Half Hour Glasses, Microscopes and Magnifying Glasses, Hydrometers of silver and glass, hydrometers for acids and salts, Magic Lanterns, Electrical Machines, &c., also, Surgical and Dental Instruments; Pocket, Dissecting, Cupping and self-injecting cases; Taylor's Sheers, all sizes; Syringes, large and small, Scarificators, Lancets; Forceps; Turnkeys; large Scales and Weights for Druggists; Prescription Scales on Stands; Revolvers, [illegible] Pistols, Powder Flasks, Game Bags, &c. ☞ All the above Instruments repaired at short notice in the best manner.

Fruit Trees.

FRUIT TREES AND SHRUBBERY, for sale by the undersigned, at their fruit farm and nursery. This establishment is located seven miles South of St. Louis, Mo. There are Omnibus Coaches running daily from the City within one half mile of the establishment. The Nursery and Gardens are open at all times (Sundays excepted), for the reception of visitors. Horticulturists and amateurs are respectfully invited to visit the establishment and examine for themselves. In directing the attention of the public to their nursery, they would remark that one of the firm, (Mr. James Sigerson,) has been engaged in the above business for the last twenty-five years; during that time he has tested many of the varieties now growing. This, with the assurance on their part of an intention to increase the number of their trees, as well as to add to their assortment from year to year, furnishes a strong guarantee to persons wishing to make choice selections of fruit, that they can always be supplied. Their prices for trees will be as reasonable as at any similar establishment East or West, and when desired, trees will be delivered free of charge in the city or on steamboats; packed in good order for their destination.

☞ All letters addressed to John Sigerson, St. Louis, or to James Sigerson, Carondelet, will meet with prompt attention.

JOHN SIGERSON & BROTHERS.

Hardware.

P. WONDERLY, Manufacturer of Copper, Tin and Sheet Iron Work—such as Copper Pipes for Steamboats and Distilleries, Soda Fountains, Copper Boilers, Well and Cistern Pumps, and every other article in his line of business. No. 233 Main street, South-east corner of Cherry St. Louis, Mo. He also manufactures and keeps constantly on hand, Premium Steamboat Cooking Stoves. Tinware always on hand, wholesale and retail.

Furniture.

WM. M. HARLOW, proprietor of the St. Louis Furniture Store, manufactures and keeps constantly on hand every variety of household furniture, mattresses, window blinds, willow ware, &c.

Also, manufactures to order every article in his line, with despatch. Orders from abroad promptly attended to, and goods carefully packed. All goods warranted as recommended.

New Warehouse, No. 80 Second street, between Olive and Locust streets, St. Louis, Mo.

Slate Yard.

JOHN M. CANNON, Slater, No. 15 and 17 South Sixth street, St. Louis, would respectfully inform the public that, having now completed his arrangements, he is prepared to make contracts for any work in his line. He has in his employ practical slaters, and is well prepared to execute in a workmanlike manner, and with despatch, all orders entrusted to his care. He keeps constantly on hand, and for sale, Welch slate, rion tiles, sheet lead, slate flagging, slate hearths, copper, brass and iron slating nails, Rosendale cement, and all other articles pertaining to his business. He will strip from roofs zinc, sheet iron, tin, or other covering, and substitute therefor slate. Slate removed from one roof, can be used to advantage on another, which is not the case with any other roofing material. His terms are such as cannot but prove satisfactory. Apply as above.

Paper Hangings.

WOLF & ENGERT, Importers and dealers in Paper Hangings, Colors and Fancy Papers, No. 49 South Second street, between Elm and Myrtle, St. Louis, Mo. Constantly on hand, all kinds of oil and water colors, paper-hangings, chimney screens, tester pieces, window shades, marble, marroquin, Gold and Silver paper, painters' and Dutch gold bronze, lead pencils, paint boxes, paint brushes, drawing papers, &c. April, 1850

Washington Steam Sash Factory.

B. PHILLBERT,

WASHINGTON Avenue and 14th street, south side St. Louis, Mo., makes Doors, Sash and Blinds Also Door and Window Frames. Terms moderate N. B.—Slitting and Planing, done here.

Banking Houses.

PAGE & BACON, Banking House No. 139 Main street, St. Louis, next door to the Bank of Missouri.

N. B. Deposits received, Drafts and Notes from all parts of the Union collected and Exchange on the East and South for sale at all times.

Also Branches of Exchange and Banking Houses at San Francisco and Sacramento Cities, California.

L. A. BENOIST & CO., bankers and exchange dealers, No. 83 Main street, east side third door north of Olive street, St. Louis, Mo. Interest paid to depositors, drafts and notes collected, sight and time bills purchased, and sight exchange on the eastern cities and New Orleans for sale, at the lowest rates, in sums to suit purchasers.

JOHN J. ANDERSON & CO., bankers and exchange dealers on the north-west corner of Main and Olive streets, St. Louis, Mo. Interests paid to depositors, drafts and notes collected, sight and time bills purchased and exchange on the eastern cities and New Orleans for sale at the lowest rates.

LOKER, RENICK & CO., bankers and exchange dealers, No. 132 Main street, west side, third door north of Vine street, St. Louis, Mo. Interest paid to depositors, drafts and notes collected, sight and time bills purchased and sight exchange on the eastern cities and New Orleans for sale at the lowest rates in sums to suit purchasers.

LUCAS & SIMONDS, Bankers and Exchange Dealers, Corner of Main and Chestnut Streets, St. Louis, Mo.

Drugs.

CHABLESS, BLOW & CO., Importers and Wholesale Dealers in Drugs, Paints, White Lead, Oils, Window Glass, Glassware, Perfumery, &c., Nos. 70 and 72 Main Street, St. Louis, Mo.—☞ N. B. Ginseng and Beeswax bought at highest market rates.

St. Louis Cotton Factory.

ADOLPHUS MEIER & Co., Manufacturers of St. Louis Cotton Yarn, &c., Importers and Dealers in HARDWARE and CUTLERY, No. 22, corner of Main & Chesnut Streets, St. Louis, Mo.

Hats & Caps.

H. & R. B. WHITTEMORE & CO., wholesale dealers in Hats, Caps, Bonnets and Straw Goods, No. 153 Main str., St. Louis, Mo.

☞ Cash paid for Furs and Deer Skins.

Dry Goods.

CROW, McCRERRY & CO., Wholesale dealers in Dry Goods, No. 71 Main street, St. Louis, Mo. Wayman Crow, Phoceon R. McCreery, Wm. H. Barksdale, Wm. A. Hargudine, Charles D. Appleton.

WOODS, CHRISTY & CO., wholesale dealers in Dry Goods, No. 75 Main street, St. Louis, Mo. James Woods, William T. Christy, James C. Christy, Robert K. Woods.

CROUTEAU, HARRISON & VALLE, Commission Merchants and Proprietors of the St. Louis Rolling Mill. Manufacturers, from the ore of the Iron Mountain, of Bar Iron in all its various shapes. Sheet Iron and Boiler Plate, Nails Spikes, &c., &c.

Warehouse No. 129 North 2d street, St. Louis

Watches and Jewelry.

C. D. SULLIVAN & CO.,

JEWELLERS, Watch and Clock Makers, No. 39 Fourth Street, opposite the Planter's House. A large and well selected assortment of Clocks Watches, Jewelry and Silver Spoons constantly on hand and for sale low. All kinds of Jewelry made to order and neatly repaired. Engraving neatly executed. The highest price paid for old Gold and Silver. All orders punctually attended to.

March 1853.

PACIFIC RAILROAD.

Winter Arrangement.

On and after the 20th of October, or until further notice, trains will run regularly Every Day, including Sundays, connecting at Meramec with F. Bartold's Stages to Manchester and Ellisville, and at Franklin with Sanger & Co.'s stages to Jefferson City, and Washington, Mo., as follows, to wit:

ST. LOUIS TO FRANKLIN.

Leave St. Louis at	9 30	A. M.
do. do.	4 00	P. M.
Arrive at Franklin at	11 15	A. M.
do. do.	6 05	P. M.

FRANKLIN TO ST. LOUIS.

Leave Franklin at	7 00	A. M.
do. do.	1 00	P. M.
Arrive at St. Louis at	8 45	A. M.
do. do.	2 45	P. M.

The above trains stop at all the way Stations.

Omnibusses leave the Planters' House, on Fourth street, half an hour in advance of every train, and run regularly in connection to and from all the trains.

Passengers are particularly requested to purchase tickets of the Agents, at each end of the line, before taking seats in the Cars. Extra charge for tickets purchased in the cars.

U. S. MAIL.—Sanger & Co. will run a daily line of four horse Post Coaches as follows: Leaving Franklin in connection with the 6 30 A. M. train from St. Louis. They will run coaches to Jefferson City, and thence westward and south-westward. They will also run a line of four horse Post Coaches, via Union, to Washington. Time to Washington, from St. Louis, 7 hours; to Jefferson City, 30 hours.

Tickets to be procured of Sanger & Co., at their office, under the Planters' House, Fourth street or at the Depot of the Railroad, on Fourteenth street.

JAMES M. WARD, Ass't Sup't.

Office P. R. R. Depot, Fourteenth street.